

TO WHAT EXTENT IS THE SHIFT TO DIGITAL READERS IMPACTING THE ROLE OF
THE ELEMENTARY SCHOOL LIBRARIAN?

A Record of Study

by

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ABSTRACT

Elementary school librarians and teacher-librarians are facing a new challenge in preparing students to become lifelong readers. By regularly and consistently promoting the principles of reading and aiding in the selection of new programs that connect students to literature, teacher-librarians can have a positive impact on student learning and help students to become lifelong readers. With the influx of new technology, the availability of electronic materials, and the changing demands placed on school librarians, the shift to digital reading may be impacting the elementary school librarian. This case study focuses on elementary school librarians and how electronic books and electronic readers might be affecting the way they perform their jobs. An intrinsic case study method was employed for this research.

Librarians from 27 elementary schools in a fast-growing large school district in southeast Texas were asked to participate. Librarians from all 27 campuses were asked to complete a brief online survey and have a face-to-face interview with the researcher. The interview contained 10 comprehensive questions to gain additional information on electronic books and electronic readers in the school library and how these devices might be changing the role of the school librarian.

Although not all librarians participated with only eight surveys returned and four interviews completed, themes surfaced in examining the librarians' responses. Now, with this research, it appears that elementary school libraries would be better served by continuing to purchase traditional paper books and supplement the library inventory with electronic books. Even though the students of today are growing up in a fast paced, ever-changing digital world, it appears that electronic readers are not currently a critical part of that world at the elementary level.

DEDICATION

This record of study is dedicated to my wife, Jennifer Anderson, who supported, encouraged, and tolerated me during the completion of this work. She has been my guiding light and biggest fan during this process. To her I say, “Thank you; I could not have done this without you.” Additionally, I would like to include in this dedication my mother, Dorothy Anderson, who passed away during the study. You will always be in my thoughts. Thank you.

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Contributors

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TABLE OF CONTENTS

| | Page |
|--|------|
| ABSTRACT | ii |
| DEDICATION | iii |
| ACKNOWLEDGEMENTS | iv |
| CONTRIBUTORS AND FUNDING SOURCES | v |
| TABLE OF CONTENTS | vi |
| LIST OF TABLES | viii |
| CHAPTER I INTRODUCTION | 1 |
| Statement of the Problem | 10 |
| Rationale for Research | 12 |
| Definition | 13 |
| Significance of the Study | 14 |
| CHAPTER II LITERATURE REVIEW | 16 |
| Technology | 20 |
| Constructivist Learning Theory | 22 |
| The Science of Reading | 24 |
| The Role of the School Librarian..... | 28 |
| School Libraries and Literacy..... | 34 |
| CHAPTER III METHODS..... | 37 |
| Preliminary Research Question | 39 |
| Population | 40 |
| Interview Techniques | 42 |
| Instrumentation | 43 |
| Role of the Researcher | 43 |
| Procedures | 44 |
| Data Analysis | 46 |
| Assumptions | 49 |
| Limitations | 49 |

| | Page |
|--|------|
| CHAPTER IV DATA ANALYSIS AND RESULTS | 51 |
| Survey | 51 |
| Interview | 61 |
| District Documentation | 91 |
| CHAPTER V SUMMARY OF FINDINGS, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS | 94 |
| Discussion | 94 |
| Findings | 100 |
| Implications for Practice | 101 |
| Implications for Policy | 102 |
| Implications for Research | 103 |
| Implications For Administrators | 105 |
| Conclusion | 107 |
| REFERENCES | 112 |
| APPENDIX A | 131 |
| APPENDIX B | 132 |

LIST OF TABLES

| | Page |
|---|------|
| Table 1 Survey Questions and Notable Findings | 53 |
| Table 2 District Snapshot | 64 |
| Table 3 Individual School Information | 65 |
| Table 4 Interview Questions and Notable Findings | 68 |

CHAPTER I

INTRODUCTION

Elementary school librarians and teacher-librarians, are facing a new challenge in preparing students to become lifelong readers. The position statement of the American Library Association (ALA) maintains that today's students must be able to analyze, interpret, and communicate ideas in a variety of ways. Due to library programs being instrumental in presenting these ideas, students must have access to information in multiple formats that go beyond traditional printed books. These formats should include electronic books (e-books) and other forms of digital material. Libraries should provide access to needed materials in multiple formats for students and staff to meet the global changes occurring today (Bogel, 2009). The American Library Association stated that digital devices such as electronic readers (e-readers), e-books, and other digital tools are essential components needed in library collections. Schools and school districts need to provide funding and support for school libraries and the school librarian to be able to access information and create a learning environment that promotes experimentation and exploration (Bogel, 2009).

According to Johnston (2015), the role of the school librarian has become blurred, and new roles are being added to the job, namely technology specialist or media specialist. Johnston stated that technology integration is dominating a librarian's time while adding to the responsibility of leading school curriculum to prepare learners to be lifelong readers (Johnston, 2015). Doiron (2011), conducted a study on the use of e-books and e-readers to promote reading in school libraries. He concluded that the way students access reading materials and the way

students read are changing; therefore, schools must try to adapt to the new formats of reading and accessing reading materials.

By regularly and consistently promoting the principles of reading and one who helps select new programs that connect students to literature, teacher-librarians can have a positive impact on students and help them become lifelong readers (Novak, 2014). Doiron (2011), stated that a librarian's job is to find the right book for every reader and to get that book into the student's hands, regardless of the format. In a study by Morscheck (2010), it was noted that teacher-librarians have a direct and positive impact on student learning outcomes and that the development of electronic learning (e-learning) platforms can aid in this endeavor. Peters (2009), stated:

We must continue to study our students' reading habits, then design and redesign our content collection, systems, and services to help them improve and maximize their reading experiences. We are in a long-term commitment with readers. We need to be vocal, flexible, and patient as the longstanding relationship between readers and the libraries that serve them continues to evolve. (Peters, 2009, p.22)

In a more recent study it was noted that school libraries have been in existence for many years, but not until recently have the library and the school librarian been a source of enrichment for the curriculum and a way to develop positive reading habits (Lamb, 2015). Additionally, Lamb stated that with new formats available for students to access new information, school librarians need to focus on designing engaging learning environments, sharing ideas with colleagues and staff, and pursuing new ways to motivate students to become lifelong readers. School libraries and teacher-librarians are experiencing growing pressure to find ways to connect the traditional

reading goals in schools with the online digital world where so many students are spending so much time (Lamb, 2015; Novak, 2014; Doiron, 2011).

With the influx of new technology into schools, the availability of electronic materials, and the changing demands placed on school librarians, the shift to digital reading may be impacting the elementary school librarian. In 2014, a study by Peterson stated that a challenge for schools and the teacher-librarian will be in expanding the e-book collection in the library while maintaining its traditional printed book selection, its media collection, and the other services it provides.

To more fully understand how this shift is impacting the librarian, the Constructivist Learning Theory may provide a useful lens to interpret how librarians respond to changes in their professional work and identity. In delivering instruction, many constructivist users implement Vygotsky's sociocultural theory in which teachers and students create their own learning through social interactions (Garcia et al., 2011). Piaget's theory of constructivism challenges the student to become the thinker and places the teacher in the role of coach, mentor, mediator, negotiator, and the like (Stefan & Popescu, 2014). Piaget argued that people produce knowledge and meaning from their experiences. Constructivism is a model that views learning as an active, constructive process. The student is an information contributor to their learning rather than only a receiver of information for their learning. People actively construct or create their own subjective representations of objective reality. New information is linked to prior knowledge; thus, mental representations are subjective. The Constructivist Learning Theory suggests that people produce knowledge based on their experiences and that learning comes from two concepts: assimilation and accommodation. Assimilation causes the learner to incorporate new experiences into old experiences. This helps the learner develop new outlooks, rethink what

might be misunderstood, and evaluate what is important, possibly altering their perceptions. Accommodation puts new experiences into the mental capacity that already exists. The role of the teacher, or teacher-librarian in the case of libraries, is important in the Constructivist Learning Theory. The teacher-librarian becomes the facilitator who helps the student when it comes to their own understanding of information rather than merely giving out the information. The focus thus moves from teacher-led or librarian-led instruction to student self-directed learning. Librarians become the mentors and facilitators of reading. They help students with their own reading abilities and literature preferences. The teacher-librarian becomes the enabler to help students become lifelong readers. The library environment, reading materials, and tools needed to be a successful reader are some of the responsibilities of the school librarian.

According to research by Almasi, Garas-York, & Shanahan (2006), the learning environment is directly related to reading comprehension. These researchers stated that the environment includes an integrated curriculum, clear instruction related to reading strategies, opportunities to discuss the thinking process, and the introduction of tools needed to make meaningful connections. Seeing reading through the lens of the Constructivist Learning Theory, teacher-librarians can provide the opportunity, the materials, and the guidance needed for students to be motivated readers. In the landmark research by Zimmerman, Bandura, & Martinez-Pons (1992), reading motivation is related to a student's self-efficacy and their academic self-regulations. Teacher-librarians can be advocates to motivate and promote reading, they can create environments in which students learn to read, and they can create learning situations that reinforce comprehension strategies (Almasi, Garas-York, & Shanahan, 2006).

According to Guthrie, Wigfield and Von Secker (2000), reading comprehension is a result of extended amounts of engaged reading. Engaged reading is influenced by what happens

in the classroom (Guthrie, 2001) and by the environment created by the teacher or teacher-librarian (Almasi, Garas-York, & Shanahan, 2006). Reading is a critical element in the education of all students. According to Igbokwe, Obidike & Ezeji (2012), reading adds to the quality of life and informs students about culture and cultural heritage. Guthrie, Hoa, Wigfield, Tonks, & Perencevich (2006), stated that students are expected to read and comprehend a wide range of materials to gain information and knowledge about subjects.

To stimulate reading interest and engagement and to promote reading and literacy, e-readers are being introduced into school libraries (Clark, 2010; Doiron, 2011; Du & Martin, 2008; Perez, 2010; Valenza & Stephens, 2012). According to an article in the *School Library Journal* by Hoey (2010), middle schools appear to be the most receptive to the movement toward e-books and e-readers. After surveying 697 school libraries, most within elementary schools (71%), it was noted that only about 33% of the schools carried e-books; only one-fourth of the elementary schools reported having this technology. Another study by Clark (2010), was conducted in which 17,089 students from 112 schools were asked about their background, reading behavior, and perceived ability and attitude regarding reading. Most students, almost 70%, stated that they used the school library and that they felt it was a safe and friendly place to read (Clark, 2010). Teacher-librarians who are involved in student instruction can have a direct impact on learning outcomes (Morscheck, 2010). Morscheck stated that even though e-learning platforms are relatively new, little research has been conducted on the learning outcomes of students who use e-books. School libraries, as a potential hub for innovative learning technology, appear to have the resources to positively affect the relationship between reading behaviors, reading motivation, reading engagement, and reading comprehension (Huysmans, Kleijnen, Broekof, & van Dalen, 2013).

A study of reading attitudes worldwide (PIRLS, 2007) found that fourth graders in the United States lag behind their peers in other countries in reading attitude and motivation. Research studies have found evidence that reading motivation is a predictor of student achievement (Guthrie, Wigfield, & VonSecker 2000) and that student attitudes about reading can influence reading achievements (Petscher, 2010). Petscher (2010), conducted a meta-analysis on the relationship between student reading attitude and achievement in reading. He concluded that reading attitudes are positively linked to home literacy practices, classroom activities, and instructional methods. Using the Constructivist Learning Theory as a lens to view reading practices, librarians, teachers, and parents can help motivate and engage students to become active readers.

Igbokwe & Obidike, (2012) and PIRLS (2007), noted that the declining interest in reading in elementary school students is alarming and in need of change. According to the research by Doiron (2011), school libraries are pressured to find ways to connect traditional reading goals, such as comprehension, author purpose, and inferencing author meaning, with the online world that is so prevalent today. Like Petscher (2010), Doiron found that children's motivation to read can be influenced by home and family. An earlier study by House (2007), linked student reading achievement to the use of computers during reading instruction in the classroom, which was associated with positive gains in reading achievement, reading attitudes, and test scores. In their article "Reading Remixed," Valenza and Stephens (2012), argued that digital technologies help young readers become more engaged in reading. Petscher (2010), stated that the question is not whether a relationship exists between reading attitudes and reading achievement, but rather under what circumstance does the relationship gain meaning and value for the student. The elementary school library often serves as a starting point in developing a

reading culture (Igbokwe & Obidike, 2012), and librarians can be the support needed to enhance positive reading attitudes.

According to Doiron (2011), librarians must embrace these new technologies and use the attraction of an electronic device to motivate students to read so that they can be the mobile learners of the 21st century. Authors are also addressing the challenge by writing and releasing books in both the traditional paper copy and in electronic formats that meet the needs of students who are growing up surrounded by multimedia (Valenza & Stephens, 2012).

Valenza & Stephens (2012), stated that the experience and relationship between the reader and the author are evolving. Books are changing from the traditional paper-bound copy to a digital format, incorporating interactivity and other digital aids such as definition capabilities and reading out loud to the user functions. The Library Research Service, which provides research and statistics about libraries, conducted a survey asking librarians about their predictions of the future for paper books. A total of 1,326 participants from all 50 states and 24 countries completed the survey. Sixty-three percent of respondents predicted that paper books will never disappear; however, the librarians did acknowledge that there were many discussions among their colleagues about the use of traditional paper books versus e-books in the library. Thirty-nine percent of the librarians predicted that, in 10 years, there would be more e-books in the library than there are now. Forty-three percent predicted that there would be about the same amount currently seen. Comments by the surveyed librarians suggest that there is indeed a concern for the future of traditional paper books. In a different study in 2008, Shepperd, Grace, and Koch conducted research evaluating the electronic textbook (e-textbook) and whether it would replace the paper book. They concluded that instructors should be cautious when incorporating e-textbooks in the classroom due to the lack of student use and interest. Students

in the study remained neutral on their ratings of e-textbooks (Shepperd, Grace, & Koch, 2008). Shepperd, Grace, and Koch (2008), reported that students in the study did not spend more time reading, either at home or in the school library, using e-textbooks, nor did they receive higher grades in their classes. Continuing research is needed to have a better understanding of how e-books impact the role of the librarian related to reading instruction, reading attitudes, and student achievement.

Differing from Doiron (2011), and Valenza and Stephens (2012), an earlier article in *The Hindu* newspaper (Ganguly, 2004) stated that technology is taking control of individual lives and contributing to poor reading habits. This article claimed that computers, television, surfing the Internet, and electronic games are a part of everyday life for most people; however, reading a book that comes from a library is becoming an antiquated idea for many of these same people. In 2008, Du and Martin surveyed librarians about electronic media and leisure reading. They concurred with *The Hindu* newspaper article in that playing computer games, watching television, and surfing the Internet distract from reading habits.

Prior research from DeJong and Bus (2004), suggested that the features offered by digital devices are distracting to the reader and detract from reading comprehension. This is different from other, more current, research concluding that e-books can be useful in engaging the reader and aiding in the motivation to read (Grant, 2004; Fasimpaur, 2004; Ip, Chu, & Sit, 2008; Grimshaw, Dungworth, McKnight, & Morris, 2007; Korat & Shamir, 2008; Maynard, 2010; Dorion, 2011). In addition, Du and Martin (2008), highlighted that reading habits are being influenced by parent workloads, social influences, and family role models. There appear to be inconsistent opinions about whether e-reading material does or does not influence reading habits.

Teacher-librarians can be an advocate for reading in schools, enabling students to develop positive readings habits, encouraging positive reading attitudes, boosting reading motivation, and helping students become lifelong readers. Teacher-librarians have agreed that they and parents must work together to increase reading time and reading interest with students (Igbokwe, Obidike, & Ezeji, 2012). Viewing reading through the lens of the Constructivist Learning Theory, which advocates for a didactic relationship between student and teacher, may effectively allow the librarian and parent to be the facilitators of both time and material involved with student reading. These facilitators might influence what the learner decides to read as they are developing their interests and preferences.

In 2012, Harris wrote an article about e-books and school libraries. He stated that the cost of replacing printed text with e-books and e-readers is often very difficult for schools. He also suggested that the content and availability of e-books are not always ideal for schools; for example, the purchase of multiple copies of a book for reading groups is often difficult (Harris, 2012). He did conclude that e-reading devices prove successful with struggling readers due to the devices' built-in features, such as a single-page display that allows students to focus on one page at a time rather than worrying about or seeing how many pages remain and the capability of the device to read aloud to the user (Harris, 2012).

Few studies have examined the impact that electronic devices like e-books have on student reading attitudes when students are given the opportunity to learn with the technology available in their school (Felvegi & Matthew, 2012). According to Robinson and Sebba (2009), access to digital technologies and support provided to schools from vendors and school staff such as teacher-librarians can influence student use of the technologies involved in the learning process. Some research has been conducted on the benefits of e-readers and student

comprehension (Moody, Justice, & Cabell, 2010). It has been found that e-readers may benefit learners with a better understanding of the text, the devices may help with visual meaning, and the technology could make text comprehension easier (Verhallen, 2006; Ertem, 2010; Aydemir, Ozturk & Horzum, 2013). The features of e-readers are an integral part of aiding the reader in a better understanding of the text. Teacher-librarians can be a mentor for students by demonstrating the features available in e-readers, thus allowing the student to decide what features to use when reading; this practice exemplifies the Constructivist Learning Theory.

Statement of the Problem

Teacher-librarians are facing new challenges with the diverse and rapid changes occurring in reading technology. They are faced with deciding in which format to supply books to their readers—traditional paper copies or electronically. Technology integration for learning is an overriding factor in changing the responsibility of the teacher-librarian for the success of students in our global society (Johnston, 2015). The teacher-librarian is faced with a possible redefinition of their role from traditional librarian into media specialist who incorporates technology into the reading curriculum and the classroom. According to Johnston (2015), integration into the curriculum involves the blending of technology as a tool into content areas to enhance learning. Teacher-librarians are mentors, are conveyers of information, and are involved in the making of lifelong readers. They must motivate readers and engage all students in the reading process. According to the American Association of School Librarians, (Mardis & Dickinson, 2009), the school library program must ensure that students and staff are active users of technology to process information in new ways.

Prior research has informed us that motivation is a key element in reading comprehension, reading attitudes, and student success in reading (Guthrie, Wigfield &

VonSecker, 2000; Guthrie, Hoa, Wigfield, Tonks, & Perencevich, 2006). Clark (2010), stated that there is a strong relationship between the use of technology in the school library and the achievement of reading, increasing reading attitudes, and reading enjoyment. Electronic devices such as e-readers and e-books can be a factor in student reading attitudes and the motivation to read (Hisrich & Blanchard, 2009). The influx of these electronic devices could be affecting the role of the school librarian and the role of the teacher-librarian in an elementary school setting.

Technology integration for learning is the responsibility of instructional leaders and school librarians (Johnston, 2015). According to McCracken (2001), school librarians participate in the integration of technology to enhance the learning experience and develop thinking skills. The rapid advancement of technology has redefined the role of the school librarian as an advocate for blending literacy skills into the curriculum using technology (Doiron, 2011; Valenza & Stephens, 2012; Harris, 2012; Novak, 2014; Richey & Cahill, 2014). Meredith (2015), stated that library resources should exist in both the physical and digital realms. As students are becoming independent users of digital technology, the library has an opportunity to provide to students the devices with which they are most familiar.

Digital technology can be incorporated into traditional library practices such as book clubs, literature circles, and book fairs (Novak, 2014). Today, using technology, authors can be brought right into the classroom without being present. Distance learning, Web-cams, video chat, and other presentation software now enable the user to reach out and contact people all over the world. Teacher-librarians can embrace this technology and expose their students to multiple literary figures. Novak reinforces that the teacher-librarian must be a vocal advocate for their profession to promote reading and connect students to literature. Technology integration lends itself to the teacher-librarian becoming a vital part of the learning process. The librarian can

lead, mentor, and promote technology to create a meaningful learning experience for all students (Johnston, 2015).

Rationale for Research

Based on evidence regarding reading achievement, this record of study seeks to examine how the shift to digital materials might be impacting the role of the elementary school librarian. Per the Progress in International Reading Literacy Study (PIRLS) conducted in 2001 and 2007, which examined student attitudes toward reading, students in the United States have lower reading motivation than most other countries examined. Only 6 of the 45 countries surveyed had a lower percentage of students with positive reading attitudes than the United States. Motivation to read is a necessary element to engage students in the reading process and is an important factor in student success in school (Morgan & Sideridis, 2006). Bergstrom & Hoglund (2014), suggest that the features in e-books and e-readers can contribute to and are positively linked to the reading development of elementary school students. School librarians must be involved in the integration of technology into the elementary school library (Lamb, 2015; Doiron, 2011; Du & Martin, 2008). The teacher-librarian, through the lens of the Constructivist Learning Theory, can be the provider of materials, creator of a positive learning environment, developer of curriculum, and promoter of positive reading habits to influence the reading of all students by overseeing their learning and developing positive reading practices. Therefore, with this record of study of how electronic devices might be changing the way school librarians manage their libraries, schools and school districts can determine to what extent they wish to invest in technologies used for reading. To better narrow the focus of the technology devices in use, a definition is needed.

Definition

E-books, e-readers, and digital readers can be defined as devices that contain publications in digital form. They may contain text, images, or both, and are readable on a computer or another electronic device (<https://en.wikipedia.org/wiki/E-book>). E-reader technology is a growing industry giving teachers, students, and librarians access to hundreds of thousands of books. E-readers are portable electronic devices that can be used to read digital materials. Often, smartphones, tablets, and personal computers are loosely defined as e-readers due to their ability to have e-books loaded onto them. Books on an e-reader may contain hyperlinks to other resources that can add to the enrichment of the reading experience. E-books can be purchased or downloaded, sometimes for free, from a public domain. Publishers are now releasing more digital books to keep up with the rapid changes in this fast-paced global world of electronic reading. Digital devices such as e-readers are growing in availability, with their use among students and their families increasing (Doiron, 2011).

Johnston (2015), stated that technology is a tool used to enhance the learning experience of students across a multidimensional curriculum. Effective integration of technology is achieved when students can select the tools that will motivate them and positively affect their attitudes in school, when viewed through the lens of the Constructivist Learning Theory. Reading attitudes have been defined in early research as a continuum of positive to negative feelings toward reading (McKenna, 1995). In a landmark example, Alexander and Filler (1976), defined reading attitude as a system of feelings related to reading that causes the reader either to approach reading or to avoid a reading situation. Attitudes are central psychological concepts that play an important role in a student's motivation to read (Petscher, 2010). In early research

by Kush and Watkins (1996), they suggested that there is a steady decline in student reading attitudes as students progress through elementary school.

Continuing research in this area has produced capricious conclusions. A study conducted by Krashen and Van Sprecken (2002), stated that there is little evidence supporting this decline in reading attitudes. Krashen and Van Sprecken did determine a decline in reading attitudes when academic reading, as opposed to student-selected reading, is involved. Additional early research by Baker (1999), and McKenna (1995), suggested that student attitude is a critical factor in student reading success and in the reading process.

Significance of the Study

With the interest level in reading appearing to be declining (Igbokwe & Obidike, 2012; PIRLS, 2007), teacher-librarians now have an option in the way reading material is presented to students. Through the lens of the Constructivist Learning Theory, teacher-librarians can influence the reading engagement, reading motivation, and reading interests of students with the use of technology. They can create a learning environment to enhance multiple reading strategies used in reading instruction (Almasi, Garas-York, & Shanahan, 2006). Using the technologies that are so prevalent in society today (Valenza & Stephens, 2012), teacher-librarians can increase reading attitudes and reading enjoyment, possibly leading to more academic success in school (Clark, 2010).

State of Texas Assessment of Academic Readiness (STAAR) scores are used in Texas to measure student progress and to meet the federal regulations of the No Child Left Behind (NCLB) legislation. Currently, this federal regulation falls under Every Student Succeeds Act (ESSA) adopted in 2015. NCLB was enacted in 2001 by the United States government to improve individual outcomes in education. NCLB requires states to develop assessments of

basic skills such as reading and math. With a better understanding of what might affect a student's reading attitude, school leaders and school districts can possibly make better-informed decisions when integrating technology into the curriculum to improve student learning outcomes. Well-informed decisions about current technologies and available digital media may help bolster student reading attitudes. Student achievement could be influenced with a better understanding of the available technologies and the integration of digital media into the school curriculum.

Additionally, schools and school districts need to consider the cost factor involved in implementing a digital reading library. According to Harris (2012), it may not be practical for a school to purchase the needed copies of e-books for the e-reader. Harris stated that there are limitations to the volume and content of books available for e-readers. According to Peterson (2014), school libraries face additional budgetary challenges in that they are still maintaining traditional paper books as they attempt to expand their e-book collection. Budget restrictions, school population, district involvement, and librarian preferences could be factors in the decision to employ digital reading technologies.

Digital media have gained popularity through the development of technologies such as e-readers and e-books (Aydemir, Ozturk & Horzum 2013). According to Ertem (2010), technology and digital text have the potential to help students with reading and learning. Teacher-librarians can enhance a student's digital experience in reading through the school library. With digital technology growing so quickly, the traditional elementary school library may change, and the teacher-librarian may need to adapt to these changes.

With this record of study adding to previous research about school librarians and the integration of digital technologies, schools and school districts may be better prepared to make decisions on the use of e-readers and e-books in the elementary school library.

CHAPTER II

LITERATURE REVIEW

The role of the school librarian is changing (McCracken, 2001). The American Association of School Librarians (AASL) has stated that the position of school librarian includes that of instructor, collaborator with fellow educators, and promoter of student learning. In the position statement of the AASL (2009), the school librarian teaches students how to be inquiry-based learners who evaluate both printed and digital text with the goal of developing lifelong learning and literacy skills. As educators and instructional partners, school librarians are critical to the learning process in schools (Mardis & Dickinson, 2009). Now, the elementary school librarian is positioned to instruct the school community with the use of both traditional paper books and digital materials.

School libraries date back centuries, and the person running the library, the librarian, historically oversaw keeping books shelved, checking out books to patrons, and maintaining the supply of materials needed in the library. Around 1990, the role of the school librarian began to shift from the keeper of books to that of a teacher-librarian, who not only maintained books but also taught about reading while beginning to assimilate technology into the school library curriculum. Johnston (2015), stated that the school librarian began to play a leading role in the integration of technology into the school curriculum for fluency, comprehension, and reading strategies so that all members of the school community could become active users of new ideas and information provided by the library. With this change, teacher-librarians began to weave technology into areas of the curriculum where they were most experienced, namely reading, and became literary leaders in their schools. Reading is a foundational skill for all learners. The

school librarian, through the lens of the Constructivist Learning Theory, is the guide and mentor for all students to effectively use information to comprehend, analyze, and evaluate text in both printed and digital formats. School librarians are in a unique position to partner with other educators and the school community to develop reading habits in school-age children (AASL, 2009). Reading skills involve thinking skills, leaving the school librarian to model and collaboratively teach these skills. The AASL (2009), suggested that the librarian teaches comprehension strategies, they help students access and use background knowledge, they pose and answer questions, they make predictions and inferences, and they monitor the reading and learning process for students. The school librarian has a key role in supporting printed and online materials for classroom teachers and school reading specialists. The AASL stated that the school librarian co-designs, co-implements, and co-evaluates lessons with teachers to promote student learning. The school librarian can take on a leadership role in the development of reading strategies and promote free independent reading.

With rapid changes in the technology landscape, the role of the teacher-librarian has been forced to evolve to meet the needs of a new generation of learners, our 21st-century students. Technology integration for learning has become an overriding factor in the preparation of learners to succeed and participate in a global society. This challenge to integrate technology into the school curriculum while preparing learners for a fast-paced global society has become an additional responsibility for school librarians. School librarians are currently in a unique position due to this change to become school leaders in technology and in the incorporation of technology into the school curriculum. One reason for the development of this potential leadership role is that the school librarian can collaborate with all teachers at all grade levels in all subjects. The teacher-librarian is believed to have the knowledge and educational practices

necessary to lead teachers in the effective use of technology for instruction. Additionally, school librarians are instructional leaders who often provide professional development to their colleagues in instructional areas that incorporate the use of technology. The school librarian is often considered the technology specialist in a school.

School librarians support the use of technology throughout the school by working closely with the school's technology coordinator or fill the role of technology coordinator when a separate position does not exist; serve as information literacy and educational technology specialists in their schools; address educational technology and informational literacy skills instruction embedded in the curriculum; provide technology training for teachers, administrators, and parents; work with teachers, counselors, and administrators to prepare students to succeed in higher education, the work place, and in society; help students develop important digital citizenry attributes to demonstrate responsible use of information and technology; provide leadership in the development of local information and technology literacy standards. (ISTE, 2010, p. 1-2)

However, the roles of school librarian and technology specialist are becoming blurred (Johnston, 2015). The International Society for Technology in Education (ISTE) has stated that, when possible, a coexistence should occur between a school technology specialist and a school librarian (Cooper, 2015). The roles of instructional technology specialist and school librarian have evolved over time. These roles often intersect, which may cause confusion and misunderstanding between the two professions. The school librarian was once seen as the only person responsible for school technology; however, that has changed with the advancement of the school technology specialist position. Librarians may no longer be viewed as the technology expert on a campus; they may only be thought of as the person in charge of the school library.

The position of school technology specialist began to be seen around 1990 and overlapped with the responsibilities of the school librarian. Johnston (2015), contends that the boundaries between the school technology specialist and the school librarian have been combined, and the roles of each are not clearly defined. School librarians and school technology specialists both look for ways to integrate technology into the school curriculum to help both students and teachers. They both provide support and resources to the school and the community. When a technology specialist is available in school, the job of technology integration into the curriculum should be shared by the school librarian and the specialist. When the technology specialist position is not available, the responsibility of technology integration is often placed in the hands of the school librarian, depending on the school or district policy.

Johnston (2015), found through a survey that librarians consider the instructional technology specialist to either be a barrier to their role that needs to be overcome or an asset that could work collaboratively with their role to integrate technology into the curriculum. It was noted that most school librarians find that a full-time instructional technology specialist is best suited to meet the fast-growing technology needs of the school. A challenge that may exist for the teacher-librarian and the technology specialist is the responsibility for leading the integration and adaptation of technology into the school curriculum.

Technology integration can give the school librarian the opportunity to become a school leader and can be a vital tool in the learning process of all students. Teacher-librarians can provide meaningful experiences to their patrons, creating, developing, and maintaining lifelong readers. As a reading leader, the teacher-librarian must be prepared for technology integration, reading motivation, reading engagement, and the ever-changing learning environment of the future (Johnston, 2015).

Technology

In today's world of rapid-pace technology growth, children need to be encouraged and ready to acquire knowledge and skills for the 21st century (Ejikeme & Okpala, 2017). Learning is a process in the lives of all children. Technology is in every facet of a child's life. Ejikeme & Okpala (2017), suggest that in this technological society, the concept of reading has expanded to include digital media and electronic texts. In an educational setting, knowing how to use the tools offered by digital devices will be required of the 21st-century learner. Children, therefore, need to adapt to this trend in technology to develop learning skills. This can be accomplished with the help of the elementary school librarian (Ejikeme & Okpala, 2017). According to the AASL (2009), school libraries provide students, staff, and the school community with a quality collection of reading material in multiple formats to meet the academic needs of all learners. School librarians take a leading role in a school organization that promotes literacy projects to engage and motivate students to become lifelong readers. Literacy is important in the existence of any nation (Ejikeme & Okpala, 2017). These researchers stated that if students are not literate, they may not succeed in school or in society as effective citizens. With school libraries being used as a center for discovery and inquiry, the school librarian can collaborate with the instructional team to create effective educational lessons for students using technology. All the stakeholders in literacy development, including but not limited to the school librarian, authors, publishers, parents, and teachers, must actively participate in the reading process for the success of all students (Ejikeme & Okpala, 2017).

In a study by Newsum (2016), it was noted that the changing technology environment and the influx of digital devices have influenced the role of the school librarian in the collection and development of literacy resources. Technology innovations and information processing

require the library specialist to assist in location, use, and evaluation of the new technologies (AASL, 2013). Newsum (2016), stated that maintaining the book collection with both traditional paper books and digitally formatted books has become a significant component of the school librarian's professional practice. Digital resources pose a challenge for the school librarian in material selection, budgeting, and material evaluation (Johnston, 2015). The school librarian is responsible for collecting resources for the library in a variety of media types, namely digital material such as e-books and audio books. According to Newsum the definition of a library collection is changing to consider the wide array of digital resources that are becoming available. Newsum stated that with advancing technology, distance learning, and virtual environments, the school library is shifting from a warehouse for paper books to a learning environment where students and the school community can access information from all over the world. School librarians must make online resources available to teachers and students. The school librarian must be a participant in the development and integration of technology into the school curriculum (Newsum, 2016). School libraries, as digital learning centers, can complement lessons and student learning using online resources and digital materials that connect 21st-century learners to a global society.

School librarians can provide content and pedagogical support to teachers in schools. The AASL (2013), position statement contends that this leadership role enables librarians to be adopters of the change in technology by promoting activities and digital learning tools to engage and motivate students in the development of lifelong learning habits to compete in an ever-changing global society. The library and the school librarian are evolving in ways that can transform literacy skills and advance student achievement (Newsum, 2016). The traditional aspect of librarianship no longer exists; the school librarian must be a leader in technology

integration and must promote a variety of learning modes to meet the needs of the 21st-century learner. The school librarian, along with the classroom teacher, can facilitate and mentor students in finding the appropriate resources needed by students to engage in the learning process. This mentorship and collaboration is a constructive process integral to the Constructivist Learning Theory.

Constructivist Learning Theory

Constructivism as a model suggests that learning is an active, constructive process. The learner gathers information from their environment. The learner then actively constructs or creates their own personal representations of what they deem as reality. New information is linked to prior knowledge and experiences; thus, mental representations or the understanding created belongs to that individual. Contributors to this model include Lev Vygotsky, Jean Piaget, John Dewey, and Jerome Bruner. A key concept in the constructivism model is that discovery learning is inquiry-based and takes place in problem-solving situations, where the learner draws on their own experiences and existing knowledge to discover facts and make relationships. Students interact with the world by exploring and manipulating objects, wrestling with questions and controversies, or performing experiments. Inquiry-based learning, which starts with asking a question rather than being presented with information, allows the learner to question new issues and gain new information, making students more likely to remember the concepts and knowledge discovered.

Many schools have traditionally had a teaching model in which a teacher lectures or gives information to students. In contrast, the Constructivist Learning Theory suggests that learning happens when students play an active role in the learning process. The roles of the teacher and student are redefined. The teacher collaborates with students to help facilitate meaning for them.

Learning, therefore, becomes a reciprocal experience for the students and teacher. The role of the teacher-librarian, when viewed through the lens of constructivism, then shifts from keeper of knowledge to facilitator of information for students, helping them find information that is important and relevant to their own learning. As the facilitator of information, the teacher-librarian can use different means to communicate information. One possible way to help disseminate information to students is by using technology. The teacher-librarian can use technology to assist in writing e-learning curriculum that might help motivate, engage, and provide different reading strategies that could support students in the reading process.

Multiple strategies such as deep questioning, literature response journals, or other engagement tools should be used in authentic situations to meet the needs of different learners (Garcia, Pearson, Taylor, Bauer, & Stahl, 2011). Per Garcia, Pearson, Taylor, Bauer, and Stahl (2011), teaching reading strategies to students can lead to improved reading comprehension and motivation. These researchers recommended that instructional leaders, teachers, and teacher-librarians instruct students on how to use reading strategies while they read. However, continuing research has suggested that while this might be applicable for some students, not all students learn in the same manner. When a constructivist perspective leads teachers and teacher-librarians in their approach to teaching instructional strategies, a more cohesive framework is likely to occur (Garcia, Pearson, Taylor, Bauer, & Stahl, 2011). Instructional leaders who view learning through the lens of constructivism do not consider knowledge to be an object waiting to be discovered, but rather knowledge emerges when the learner shares their perceptions of reality. When designing lessons, teachers and students create their own learning through social interactions and collaborating with experts. Johnston (2015), suggested that the teacher-librarian is often viewed as the expert in the library and in technology integration when a media specialist

is not available. Proponents of the constructivist view do not believe that the teacher or teacher-librarian is the distributor of knowledge, but that these instructional leaders are coaches or resources that enhance the learning experience by working with the learner in an effort of discovery. A teacher-librarian becomes involved with the learner to help the learner construct their own understanding and meaning of a learning experience.

Through the lens of the Constructivist Learning Theory, the teacher-librarian becomes involved in student instruction, and the lesson becomes less teacher-centered and more student-centered. The learning situation then helps students understand what might motivate and engage them in reading, creating a situation where the student becomes a coarchitect of their own learning (Stefan & Popescu, 2014). Through the lens of the Constructivist Learning Theory, the instructor becomes a coach, role model, and/or resource manager for the student, rather than a mere transmitter of information. The teacher-librarian becomes an integral part of a student's motivation to become a lifelong reader.

The Science of Reading

Reading is learned. The human brain is not wired for reading; it is learned through an event called neuroplasticity. Neuroplasticity is defined as the brain's elasticity that accounts for the changes in the brain that last through one's life (<https://en.wikipedia.org/wiki/Neuroplasticity>). Reading is possible due to the brain's ability to rewire itself (Durant & Horava, 2015). Per Durant and Horava (2015), the more a person reads, the more the brain makes connections to develop the reading process. Durant and Horava also noted that the opposite can be true; with less reading, fewer pathways will develop. Hence, reading is not the same for everyone; factors such as time spent reading can influence a person's reading ability.

Reading is not always the same. In addition to time spent reading, engagement, motivation, and attainment influence the reading experience as well. There are two forms of engagement when reading: linear reading engagement and tabular reading engagement. Linear reading engagement is characterized as the way a person might read a fiction book or perhaps can be likened to pleasure reading. Pleasure reading is usually associated with books that are noninformational or are of an interest to the reader. Tabular reading engagement usually involves reading for information, such as reading a nonfiction science book or a technical manual for guidance to perform a specific task. Per Durant and Horava (2015), until the pervasiveness of the Internet, these two forms of engaged reading comprised the reading experience.

Sustained linear engagement reading requires emotional empathy, whereas factual or tabular reading involves the seeking of information for an explicit purpose. This would appear to be a good fit for the digital age; however, it has been noted that reading from printed pages is fundamentally different than that of reading from an electronic screen. Researchers have suggested that paper media create a deeper, more comprehensive type of reading, whereas electronic media create a skimming or surface-level type of reading (Durant & Horava, 2015).

In 2009, researchers from the University of California, Los Angeles, found that searching the Internet and reading from an electronic screen activated more of the brain than does reading from printed text. Research by Durant and Horava (2015), stated that increased brain activity indicates that there are more distractions for the reader. The researchers stated that these increased distractions impair the reader's ability to memorize facts and reflect on what was read, as well as lessen the ability of the reader to absorb information that was read. This is different

from the findings observed from linear, intensive reading occurring with printed text (Durant & Horava, 2015) in that distractions in that study proved less prevalent.

Scientific eye-tracking research has shown that people reading from a digital format are more likely to engage in skimming reading material rather than reading in-depth. In a 2012 literature survey of e-book use in academic libraries, most students and faculty reported using e-readers for a specific-information purpose without trying to read in-depth (Durant & Horava, 2015). Without in-depth reading, reading engagement and the comprehension of what is read could be affected.

Reading research is well documented. Engaged reading is a joint function of motivation to read and the cognitive strategies the reader uses during reading comprehension (Guthrie, Wigfield, & VonSecker, 2000). Wigfield et al (2008), stated that highly engaged readers are motivated readers, while less engaged readers may have lower motivation to read and have fewer strategies for text comprehension. Reading engagement is a multilayered attribute that includes performing an academic learning task, using strategies for deeper learning, and the enjoyment of the academic task (Fredrick, Blumenfeld, & Paris, 2004). In 2008, researchers surveyed 492 fourth-grade students from five different schools to determine if a correlation exists between reading comprehension and a student's level of reading engagement. The researcher's findings indicated that reading engagement and reading comprehension are positively correlated. This finding supports the theoretical framework stating that reading engagement is central to reading comprehension. An additional finding from this study was that student engagement is directly related to reading strategies and a student's comprehension. Wigfield et al (2008), noted that when students do not have a high level of engagement in reading, the strategies and comprehension are low. Therefore, it is important to identify instruction practices that can

influence a student's motivation to read in both a formal school setting and an informal home setting. Teaching reading strategies in a technology-enhanced learning environment can influence reading comprehension (Dreyer & Nel, 2003).

Dreyer and Nel (2003), suggested that students benefit from strategic reading instruction that incorporates technology into the learning environment. A more recent study was conducted in 2007 using e-books to determine if the devices had an impact on a student's reading ability and comprehension. It was noted that students in the study usually took longer to read from an e-book than from a printed book, yet their comprehension scores were not significantly different. However, when the additional e-book feature of narration was used, comprehension levels significantly improved (Grimshaw, Dungworth, McKnight, & Morris, 2007). Additionally, according to this study, this narration feature increased the reading enjoyment level for the students, and the students used the e-book dictionary feature more than the paper dictionary available in print form. These researchers noted that different types of digital books, such as e-books on a computer or e-books on a tablet, can produce different results in student reading motivation and reading engagement.

Durant and Horava (2015), noted that printed books and e-books facilitate two different types of reading. Printed text tends to stimulate more of the linear reading engagement or deep reading, whereas the electronic or screen reading promotes more of the tabular reading engagement or surface-level reading. The deep, or linear, reading promotes more sustained attention from the reader, which prompts more understanding and deeper reflections. The on-screen reading or tabular e-reading fosters impatience and the desire for instant gratification. Online reading is less favorable to the memorization process than that of reading printed material. The format does matter, and text is not interchangeable (Durant & Horava, 2015).

Guiding learners to become engaged, effective users of literature requires the reader to comprehend, analyze, and evaluate text in multiple formats. The guiding of learning is a role of the school librarian, according to the AASL. Students have an opportunity to read for enjoyment as well as seeking information. Librarians can partner with other educators to develop positive reading habits in all students (AASL, 2013). In the position statement from the AASL, a librarian's role in reading is to present students and staff with a quality collection of materials in multiple formats. They are to support a reading environment that meets the needs of a diverse learning group and the school community. The librarian should motivate readers to become lifelong learners. School librarians must collaborate with teachers, reading specialists, and other reading colleagues to deliver reading strategies to students in a variety of formats and media. School librarians must provide and participate in professional development for themselves and for teachers that models current research and promotes reading instruction.

The Role of the School Librarian

The AASL supports the position that the school librarian is an instructor of reading as well as a collaborator with fellow educators in the pursuit of student learning (AASL, 2009). School librarians instruct students who read and use both printed and digital materials for the obtainment of information. The librarian teaches students how to be inquiry-based learners when using multiple forms of electronic and printed media. School librarians lead the way in digital learning and literacy by teaching and providing professional development within their school community (AASL, 2009). This association stated that a school librarian is involved in the instruction of students, teachers, and administrators to obtain information that is presented digitally, in print, visually, and textually. As leaders in literacy and technology, school librarians

can instruct students and the school community in both traditional and blended learning opportunities.

Between the years of 1950 and 1984, the role of school librarian saw little change (McCracken, 2001). McCracken stated that with the rapid advancement of technology, library media specialist and school librarian roles began to change, which has led to confusion over their roles. Library media specialists need to understand their changing role and that it is important for them to assume the role of technology specialist to integrate technology into the school curriculum. A survey was distributed to 1,000 school librarians to determine if they could define their role in school and if they could fully implement this role. A total 505 surveys were returned; the responses suggested that the teacher-librarian/media specialists could define their role, but they could not fully implement their role as a librarian. Some barriers cited by the librarians included lack of time to plan with teachers, lack of adequate funding for the library, lack of support from classroom teachers, and unclear understanding or communication from the school principal on the defined role of the school librarian (McCracken, 2001). McCracken contended that these barriers must be overcome for teacher-librarians to implement their jobs and help students achieve their goals.

The misunderstanding of the role of the school media specialist exists even with a definition provided by professional organizations and within professional literature. In 1988, the AASL and the Association for Educational Communications and Technology published information about the role of the school librarian and the school library. They defined the role as that of a teacher, information specialist, and instructional consultant. Additional research, however, continues to show that there still exists a misunderstanding of the role of the school

librarian (McCracken, 2001). The differing perceptions that exist among school librarians themselves, principals, and teachers can be barriers for librarians to fully implement their role.

School principals often do not have a clear definition of the role of the school media specialist when compared to the librarians performing this job. This difference or lack of definition from the building principal gives school librarians an opportunity to more clearly define their role. Often the school librarian and school media specialist jobs are combined, placing the responsibility of technology integration in the hands of the librarian.

Librarians were surveyed in South Carolina in 1988 and stated that they could somewhat define their role, but they lacked the time and understanding from teachers and principals, which hindered their efforts (McCracken, 2001). A survey of principals and media specialists in Canada at this same time, revealed that both principals and media specialists view the role of the media specialist and teacher-librarian to be important, but they differed in how the role of the librarian is involved in developing curriculum and in instruction. McCracken (2001), discussed an earlier survey in 1987 of Kansas principals and teachers and stated that both teachers and principals reported a positive view of the librarian and media specialist, but both groups viewed the roles somewhat differently.

The principals in these surveys placed more importance on the information-seeking role of the librarian, such as selecting materials and providing reference service to students, and less importance on the instruction role. The teachers surveyed viewed the role of the librarian/media specialist as a resource for technology equipment, a provider of information on a subject, and a reference provider for students; they viewed the role less as an instructional leader (McCracken, 2001).

A different result, illustrated by McCracken, came from a statewide survey of school librarians in Nevada in 1988, which found librarians/media specialists viewing themselves as instructional leaders. The survey stated the library/media specialist as being involved in the curriculum in such areas as language arts, social studies, and science, thereby supporting student learning. The researcher examining these surveys stated that the school librarian or media specialist served on school committees, provided professional development in the use of technology to staff, and looked-for ways to show teachers how the librarians themselves could help with instruction. McCracken (2001), stated that the school librarians cited the misunderstanding of their role as a leader by the campus principal as a challenge for them in their effort to take on more responsibility.

A 1991 survey, discussed by McCracken, of school librarians and principals in Arizona demonstrated that both the librarians and principals viewed the role of instructional leader as a low priority in performing the job of the school librarian. McCracken stated that the librarians viewed their role as that of an information provider to support teachers and students, and the principals in the surveys held a similar viewpoint. A later study, discussed by McCracken, in 1993 in DeKalb County, Georgia, mirrored the findings in Arizona. In this study, the school librarian did not perceive the role of instructional leader as an important element of the librarian's job. The librarians suggested the role of instructional leader as belonging to lead teachers and assistant principals rather than themselves.

Whereas the role of the school librarian may differ from state to state and from school to school, there is consensus that the lack of a clear role definition for school librarian is a barrier to fully performing the role. Additional barriers such as budget, scheduling, staff, and resources also hinder the efforts of the school librarian to integrate technology into the curriculum,

collaborate with teachers, and become the promoters of reading in the school (McCracken, 2001). The position statement from the AASL on this matter stated that the school librarians are instructors, deliver professional development to colleagues, and, in addition to working with other educators, promote student learning in classrooms, learning commons, makerspaces, labs, and virtual learning areas. These learning practices include students who read and utilize both printed and digital resources to personalize their own learning (AASL, 2009).

Promoting reading and developing lifelong reading habits has always been a goal of the school librarian (Doiron, 2011). Computerization and the predominate use of the Internet have altered and redefined areas of work for the teacher-librarian. School librarians have engaged in the management of technologies, which is a change from earlier library functions that were mostly limited to the management of traditional paper books. There are automated library collections, online reference materials, and access to databases and other electronic materials within a network of connected libraries, where library Websites enable the user to navigate through a plethora of this electronic information. Doiron (2011), stated that the traditional resources and strategies for promoting reading have remained virtually stagnant. According to Doiron, there is growing research that the home environment and family interactions can influence a student's motivation to read, helping the teacher to influence the reading process in school. With peer interactions, teacher interactions, and access to an abundance of reading materials, students can become skillfully motivated readers. With technology surrounding students more and more, the teacher-librarian could benefit from exploring new technologies such as e-books and e-readers to help support the motivation of students to read (Doiron, 2011).

In the 1990s, the number of people using the library reached a peak, which was a sharp rise from the 1960s and 1970s (Huysmans, Kleijnen, Broekhof, & van Dalen, 2013). It was

suggested that this peak was due to the rise of printed materials available to the public during this time. A steady decline of library usage has existed ever since. Now, older and younger generations differ in library usage, namely printed material versus electronic material. The older generation grew up with printed text, books, newspapers, and magazines. They used these media as a resource for gaining information or simple pleasure reading and have mostly remained loyal to this printed form of media. The younger generation has grown up with a wide range of media forms including instant online access to reference materials, electronically formatted books and magazines, and the traditional paper printed materials. This creates a balance between printed material and electronic material that is vastly different from what the older generation experienced. This younger generation has grown up with a much more diverse media experience than the generation of 40 to 70 years ago. The shift has led authors and publishers to be more sensitive toward electronic media in addition to printed media (Huysmans, Kleijnen, Broekhof, & van Dalen, 2013).

Huysmans, Kleijnen, Broekhof, & van Dalen (2013), stated that the library has become a potent tool for schools to increase student reading motivation, train teachers, and supply information about book collections within multiple subjects. The library frequently provides schools with a reading and, sometimes, media consultant. This resource is often the teacher-librarian. The teacher-librarian assists students in finding books and information while supporting teachers with educational materials and teaching expertise. The teacher-librarian can create an environment that encourages students to be motivated, engaged readers. Huysmans, Kleijnen, Broekhof, & van Dalen (2013), stated that their findings positively link reading for pleasure to language development and the ability to read. Given this positive link between reading and school libraries, the teacher-librarian should include multiple ways for students to

access information in both electronic and paper formats in the library collection. Teacher-librarians should be reading promoters who motivate and engage students in reading, enabling them to become well-rounded, enthusiastic readers. The role of an effective school librarian and having an effective school library program are central in preparing students for living in an information-rich society (AASL, 2009).

School Libraries and Literacy

“Effective school libraries are dynamic learning environments that bridge the gap between access and opportunity for all K-12 learners” (AASL, 2013, p. 1). With the leadership of the school librarian, the library provides students and staff with resources to connect the classroom to real-world events. By offering a variety of technology opportunities, the librarian can connect students to information to create a deeper, more personalized learning event. Effective school library programs help prepare students for college, careers, or other interests they may wish to pursue (AASL, 2009). The AASL stated that under the supervision of a certified school librarian, the school library delivers a well-balanced educational program that meets the needs of all students. Well-funded, well-functioning school libraries have multiple resources in both printed and digital formats available to patrons. The library learning environment provides an equal opportunity for all students to learn. With an effective school library program and a school librarian who serves as an instructional leader, the school library develops into an environment that promotes literacy for all students and contributes to the professional learning of all educators.

There is a strong relationship between the school library and reading attainment (Clark, 2010). Attainment is the act of achieving a goal that one has worked toward, especially an educational goal. Clark and Zoysa (2011), identified that a relationship exists for reading

attainment. They stated that reading enjoyment and reading attitudes influence reading attainment and that attitudes and enjoyment are strongly linked to reading behaviors, which also influence reading attainment. Reading enjoyment is a behavior that happens both in and out of school. Reading enjoyment is related to text comprehension and grammar, which are specific aspects of reading attainment (Clark & Zoysa, 2011). Per Clark (2014), the lack of enjoyment can be a cause to not learn. The enjoyment of learning is contingent on the willingness and engagement of the learner. The enjoyment will not take place unless the task is presumed enjoyable, which can result in the motivation to begin learning, leading to the enjoyment that can guide the persistence of learning. Enjoyment can, therefore, be influenced by different factors, including whether the librarian is liked or if the student enjoys the environment in the library (Zimmerman, 2005).

Reading attitudes have been positively linked to the enjoyment of reading (Clark & Zoysa, 2011). Reading attitudes are linked to the general experience of reading. A reading attitude can be influenced by many factors that may include both the family and school. The school librarian can be an influence on a student's reading attitude by helping that student be a more confident reader and have a better-perceived ability to read. Clark (2010), stated that school library users are more likely to enjoy reading and have better attitudes toward reading than nonlibrary users. School libraries and school librarians play a significant role in the development of reading enjoyment, reading attitudes, and reading attainment. The school librarian can motivate and engage students in reading, helping to create avid readers.

By promoting the values of reading, initiating programs that connect students to literature, and promoting themselves as experts in reading, teacher-librarians are contributing to the guidance of students to be literate library users (Novak, 2014). Teacher-librarians are taking

opportunities to share their passion for literature and reading through the use of technology. Teacher-librarians are transforming traditional classroom practices, such as read-aloud and guided reading groups, to incorporate technology in innovative ways to generate excitement and engagement in reading for their students. The teacher-librarian includes activities such as digital field trips or interactive story-writing. Novak (2014), suggested that students today are digital natives, and engaging them with new and different ways to read offers exciting possibilities for the teacher-librarian.

Technology and e-books have been present in libraries for many years. It has only been recently that the next generation of readers has created a significant surge in the market for e-readers (Hoey, 2010). Just as the interest in e-books is growing in the general population, they are also gaining interest from school librarians. The teacher-librarian must consider materials, formats, and how this technology fits into the curriculum to meet the needs of the customers. The teacher-librarian must evaluate the advantages and/or disadvantages of books in an electronic format, including budget, storage, damage, and replacement costs. Libraries must serve the needs of a diverse population, which could make book selection challenging. As the formats and tools become available for accessing information, the school library will continue to focus on providing ways to engage its patrons and design the learning environment to best fit the needs of that learner (Lamb, 2015). New ways of creating, organizing, and sharing information will continue to grow as the school library and the role of the teacher-librarian continues to evolve.

CHAPTER III

METHODS

This record of study focused on elementary school librarians through the lens of the Constructivist Learning Theory and how e-books and e-readers might be affecting the way that teacher-librarian perform their jobs. An intrinsic case study method was employed for this research. Stake (1994) suggested that researchers who have a genuine interest in a case should use this approach when the intent is to better understand a situation. Yin (1984) defined the case study research method “as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used.” The intrinsic case study method is not used because the study represents other cases or because it illustrates a trait or problem, but because the subject itself is of interest. The purpose of this study was not to come to understand some abstract construct or generic phenomenon, but to learn more about e-books and e-readers and the effect they might have in changing the role of the elementary school librarian.

A case study method enables the researcher to closely examine data within a specific context (Zainal, 2007). This case study method selected a limited number of individuals as the subjects of study. This record of study explored and investigated a current real-life situation through detailed background analysis of a limited number of events and their relationships to each other. Data were collected through surveys and face-to-face interviews. School board policy was examined as it applies to elementary school libraries and librarians. The position of the school district on the use of e-books and e-readers was analyzed to better understand any

initiatives being pursued involving these devices in school. Only public access data were analyzed. This was a single study. A single-case design per Gall, Gall, and Borg (2007) is a research design most often used in the fields of psychology, education, and human behavior in which the subjects serve in similar capacities and are collectively studied as one case, rather than as a group. Researchers use single-subject design because it considers individual differences rather than group differences, which are sensitive to averages of groups. Consistent with qualitative research, the design of the case study is determined by the researcher and is specific to what is being studied; in this instance, the e-books and e-readers were examined in relationship to the effect on a school librarian's job. Qualitative research is a way of exploring and understanding groups or individuals in a social setting (Gall, Gall, & Borg, 2007).

According to Creswell and Creswell (2007), this process involves questions and procedures, data analysis from specifics to general themes, and the researcher making interpretations of meaning from the data collected. This record of study followed a case study protocol. A case study protocol is a set of guidelines that can be used to structure a case study project (Yin, 1994). This protocol is useful when the data collection process occurs over multiple locations and periods of time (Yin, 1994). The following outlines the protocol and procedures used by the researcher.

1. Pose research question
2. Select cases—information gathered for the whole study
3. Select data gathering tools
 - a. Survey
 - b. Interview
 - c. Document analysis
4. Prepare to collect data

5. Collect data in the field
6. Evaluate and analyze data
7. Prepare report

Preliminary Research Question

To what extent is the shift to digital readers impacting the role of the elementary school librarian? This question was selected to help better understand how electronic media might be impacting elementary school librarians. The elementary school librarian can be an effective tool in helping students become lifelong readers (Clark, 2010; Novak, 2014; Lamb, 2015; Johnston, 2015). According to the AASL (2009), the role of the school librarian is to offer patrons a well-balanced education and to guide students and educators through the process of formal and informal learning. Formal learning is generally thought of as direct instruction delivered by a trained teacher in an intentional way that exemplifies a top-down model and is teacher-centered (Czerkawski, 2016). Czerkawski contends that informal learning generally takes place naturally as part of an activity within a bottom-up model that is typically more student-centered. The school librarian plays an important role in the instruction of students, staff, and colleagues in a range of literacies, information dissemination, digital and printed materials, and auditory/visual aids (AASL, 2009).

Knowledge about how or if technology is affecting their position can be useful in preparing the teacher-librarian for the future. With the educational and informational landscape continuing to change, the role of the school librarian is critical to students and staff (AASL, 2009). With reading motivation and comprehension being vital for the reading process to take place, the school librarian as an educator and media specialist plays an important role in instruction and curriculum development that can actively contribute to the success of a school.

Additionally, the information from this record of study could help to better inform schools and school districts about the purchase and use of e-books and e-readers in elementary schools. If schools or school districts are moving toward a digital format in their libraries, the findings in this record of study could be useful in helping with that decision.

At the time of this study, only three elementary campuses in this district had e-readers available for student use. All three of these campuses only allowed students to read from the e-readers in the library; students were not allowed to check them out for the classroom or take them home. It was also discovered that the elementary school libraries had access to e-books, but they varied greatly from school to school in the quantity and selection owned. The libraries' e-books were mostly downloaded onto computers, with a few schools having access to Apple® iPad® devices that students could use. Prior research (Christianson & Aucoin, 2005; Clark, Goodwin, Samuelson, & Coker, 2008; Maynard, 2010; Woody, Daniel, & Baker, 2010; Shepperd, Grace, & Koch, 2008) had been conducted on electronic media with secondary and higher education institutes; however, there was little information surrounding elementary school students' use of e-books and e-readers. This record of study adds to the growing research of electronic media in the elementary school library.

Population

Librarians from 27 elementary schools in a large, fast-growing school district in southeast Texas were asked to participate. According to the Texas Education Agency (TEA) school report card released in 2015, there are approximately 40,000 students attending prekindergarten through 12th-grade classes in this district. The ethnicity reported for the student population is 55.2% White, 20.6% Hispanic, and 17.6% African-American, with the remaining populations listed as Other and Two or More Races. Approximately 35% of the students enrolled in this district are

categorized as economically disadvantaged, with about 32% of the student body listed as being in an at-risk population. This district reported that about nine percent of their student population has limited English language use (TEA, 2017).

The 27 elementary schools asked to participate in this study range in size from about 500 to 1100 students in prekindergarten through fifth grade. Of the 27 schools, nine are classified as Title I campuses, having more than 50% of their population enrolled in free or reduced lunch programs. All the campuses have a librarian and a school library. Some of the librarians have more than one role on the campus. The additional role most identified by the librarians was that of media specialist. Several schools have a media specialist listed separately from the librarian; these teachers are generally located in the school's computer lab.

Librarians from all 27 campuses were asked to complete a brief online survey and, if they chose, have a face-to-face interview with the researcher. The electronic survey (Appendix A), contained 14 questions that solicited the opinions of the librarians to better understand trends that might be surfacing in the district and to ask their views on the influx of electronic devices in their schools. This survey was also used to recruit volunteers to participate in the face-to-face interviews with the researcher.

The face-to-face interview contained 10 comprehensive questions based on the survey responses and prior research with librarians, hopefully to gain more insight on e-books and e-readers in the school library and how these devices might be changing the role of the school librarian. Permission was requested to audio-record the face-to-face interviews for accuracy in compiling the research data. Member-checking was employed to determine accuracy of the qualitative findings. Member-checking in qualitative research is the process of having the participants review and judge the accuracy of the report (Gall, Gall, & Borg, 2007).

Triangulation of the different data sources then occurred to determine themes. Triangulation uses multiple methods of data collection to determine the validity of qualitative research findings (Gall, Gall, & Borg, 2007). The identification of themes added to the validity of the study.

After data evaluation and analysis, a better understanding was found regarding the impact of e-readers and e-books on the role of the elementary school librarian. The research findings could also influence the way schools and school districts fund their libraries in the future.

Interview Techniques

I used an interview guide (Appendix B) and an informal conversational interview technique with the participants. The interview guide was prepared so that all participants were asked the same questions in the same sequence. According to Gall, Gall, & Borg (2007), an interview guide is a measure that specifies the questions asked to each participant in the same sequence, offering an opening and closing for the interview. This strategy ensured that all interviewees had the same opportunity to address the same questions. The response of each librarian was audio-recorded, and notes were made for accuracy in reporting the results. Additionally, I wanted to have the opportunity to elaborate and expand on the questions during the interviews, so I employed an informal conversational technique. An informal conversational interview technique is used in qualitative research and relies entirely on the response generated from the interviewer's questions (Gall, Gall, & Borg, 2007). This technique allowed me to seek out additional information from the librarians when clarification was needed.

The interviews took place in the libraries of the participants, creating a more comfortable, natural environment. These interview techniques were intended to help the participants be more at ease and allowed for a more natural response. The informal interview can help to build rapport and trust with the participants, adding to the validity and reliability of the data collected.

Qualitative validity means that the researcher checks for accuracy of the findings. Qualitative reliability suggests that the researcher's approach is consistent. Reliability was addressed with the interview guide; the same questions were asked of each librarian in a familiar environment. Validity was checked through member-checking and triangulation.

Instrumentation

The instrumentation, which refers to the tools or means by which the investigator attempts to measure variables in the data collection process, was the researcher, who conducted each interview with the librarians lasting between 45 minutes and 1 hour. The questions were open-ended, allowing for the participant to answer as little or as much as they wished. Additionally, with the informal conversational interview approach, the researcher asked clarifying questions when needed or asked the librarian to expand on their thoughts or ideas. The concept behind this interview technique was not to prove a hypothesis or explain a phenomenon, but to gain insight on e-books and e-readers through the input of the librarians. This process exemplifies the case study method employed in this record of study.

Role of the Researcher

The researcher collected surveys, conducted interviews, and analyzed district documentation as it pertains to the role of the school librarian. The surveys were examined by the researcher, looking for respondent trends and commonalities that might surface. The interviews were conducted to gain more in-depth knowledge of e-books and e-readers from the perspective of the elementary school librarian. These interviews were the researcher's effort to obtain a deeper understanding of the role of the school librarian and to be immersed in the environment surrounding electronic media that could potentially be changing that role.

As the researcher, I was the participant-observer in this record of study during the interview process. The role of the participant-observer, according to Gall, Gall, and Borg (2007), in qualitative research is to collect research data, maintaining a position of objectivity, while still having casual interactions with the individuals being interviewed. I did not anticipate or experience participant-observer bias as I did not have any personal connections to the participants or the role of the school librarian. I then used the data from the surveys and interviews to formulate recurring themes that emerged.

Procedures

A survey was sent to all 27 elementary school librarians (Appendix A) in this southeast Texas school district. The survey was in an electronic format, enabling the librarians to respond at their own pace and choose whether they wanted to participate. The survey was anonymous, with no questions that could identify who did or did not participate, and it could be completed at the school or at home. The librarians had the choice to participate as much or as little as they desired. This anonymity and choice of participation was to avoid coercion. The librarians were given a two-week window to complete the survey, and, if needed, additional time was given. All the survey responses were compiled and analyzed to identify trends and commonalities. The responses to the survey questions were placed on Post-it[®] notes and organized on large sheets of paper. The responses were then rearranged by question, matching similar responses to each question, and were then put back together in a more meaningful way. The compiled notes were then analyzed for patterns and themes by the researcher. Naturalistic generalizations from the data were applied to the librarian responses.

Naturalistic generalizations develop within a person as a product of experience. They derive from the tacit knowledge of how things are, why they are, how people feel about

them, and how these things are likely to be later or in other places with which this person is familiar. They seldom take the form of predictions but lead regularly to expectation. They guide action, in fact they are inseparable from action . . . These generalizations may become verbalized, passing of course from tacit knowledge to propositional; but they have not yet passed the empirical and logical tests that characterize formal (scholarly, scientific) generalizations. (Stake, 1978, p. 6)

These are generalizations that people can learn from the case study for themselves or to apply to other cases (Creswell, 2009).

After the survey responses were analyzed and compiled, five librarians were asked to participate in the face-to-face interview (Appendix B). The interview process is a way to gain direct access to the participant's expertise (Schwandt, 2007). Using predetermined questions, I intended to elicit authentic feelings and experiences about electronic media from the interviewee as it pertained to their job. The interview questions were based on prior responses from the survey questions, intending to gain a deeper understanding of electronic media than what became apparent from the survey responses.

These interviews were audio-recorded with participant permission. The interviews were conducted at the librarian's school at a time prearranged by the researcher and teacher-librarian that was convenient for the interviewee. The interviews were coded to protect the identity of the participants. The compiled written responses from the interviewees were given back to the participants to verify accuracy, make changes, and correct any misinformation. This member-checking and respondent validation was intended to solicit feedback from the respondents. Member-checking is an important procedure in verifying findings, assuring validity, and meeting the criterion of confirmability (Schwandt, 2007). After analysis of the responses from the

surveys and the interviews, results were published and discussed as to how librarians are responding to the influx of digital technologies in the library.

Data Analysis

Qualitative research is grounded in the assumption that individuals create social realities that tend to be situational (Gall, Gall, & Borg, 2007). By surveying and interviewing the librarians in a natural setting and creating a nonthreatening environment, trustworthiness, reliability, and validity were established. Trustworthiness refers to the quality or goodness of qualitative inquiry. Data were generated by means of answering questions from both a survey and individual interviews. As a participant-observer during the interview process, I acted as facilitator, asking questions while allowing the librarians to answer as much or as little as they were comfortable with. This allowed the researcher to use analytic induction of data. Analytic induction is the process of inferring themes and patterns from the examination of data (Gall, Gall, & Borg, 2007). Data collected from the participants were compiled, coded, and organized into segments (Creswell, 2009) with participation noted.

In survey sampling, response bias refers to the prejudice that might occur from problems in the measurement process. Response bias was not anticipated because the librarians could choose to participate or not and because the researcher had no leading questions or possible social desirability associated with the survey or the interviews. The librarians anonymously answered the survey questions online; some questions had a *yes* or *no* response choice, and others had an open-ended response. The librarians could choose to answer as many or as few questions as they felt comfortable with. The final question in the online survey asked if the librarian wished to participate in a face-to-face interview that would last approximately one hour and would be audio-recorded with the participant's permission. The researcher read the

questions to the librarian and provided additional information as requested. Through this organization and analyzation of the surveys and interviews, themes surfaced.

The first and most obvious theme that surfaced from the data was that of funding. All the librarians interviewed acknowledged that they do not receive district funding for their library and that any purchases for the school library come from money that they individually generate. All the librarians conduct book fairs to generate this money to purchase books. Some librarians apply for grants to obtain additional money. All librarians established that they are very thoughtful with the money they do spend and that, often, e-readers are out of the budget range for the library. Most librarians do buy e-books and load them onto the school computers; however, they require e-books to have multiple-use capability or the ability to be placed on multiple devices before considering purchasing them for the library. Another theme that surfaced from the interviews and surveys was library curriculum. The librarians shared that they do not have a curriculum to follow. This southeast Texas district does not have an established plan for the school libraries; this is left to campus discretion. The librarians stated that they work with the teachers on campus to help reinforce concepts being taught in class; however, they feel that their primary job in school is to promote reading. A less obvious theme that surfaced from the librarians was the lack of materials available for them to purchase. All the librarians noted that they can usually find a good supply of nonfiction e-books for purchase, but the fiction books are limited and often not available for use on multiple devices. A few less dramatic concepts arose during data analysis, one being the challenge of home and school access to electronic media. All the schools have Webpages, but not all have an e-book library on these electronic sites for student use. Schools also differ greatly in the amount of technology available to the students. The librarians alluded to this inequity being due to school location (affluent, well-

established neighborhoods compared to more transient, less affluent areas) and lack of funding from the district.

District policies were examined to understand how these guidelines could affect the role of the elementary school librarian. Public records of local and legal policies were used to analyze data from the district. These records helped the researcher determine to what extent school board policy could influence the school library and how these policies and procedures interact with student learning, as well as with the teacher-librarian (Board Policy, <http://pol.tasb.org/Home/Index/593>). It was noted that this district does not have a curriculum for the librarians to follow, nor does any policy mention funding for the libraries. The policies that do mention school libraries generally convey information about the district's right to remove vulgar and offensive material and that materials in the library should be of a certain quality and should meet the needs of all students. It is also written that the district makes every effort to ensure preservation of student rights and hold student learning as the highest priority.

Literature on student reading attitudes and what might affect reading attitudes in the classroom was investigated to have a clearer understanding of the relationship between student learning and teacher-librarian roles in schools. It has been established through research (Du & Martin, 2008; Morscheck, 2010; Clark & Zoysa, 2011; Ciampa, 2012), that there is a direct and positive correlation between student reading success and the school librarian. It has also been noted that the school librarian has direct influence on student reading attitudes and student gains on reading assessments. Studies on reading attitudes with the use of electronic devices was also examined to determine if a correlation exists between learning and these electronic devices. The research on the use of electronic devices does not show a clear correlation between them and student reading success or achievement. However, it has been established that the use of

electronic devices such as e-readers has a positive impact on struggling readers and that devices such as these can have a future in helping students with reading disabilities (Clark, 2010; Larson, 2010; Johnston, 2015). Student reading attitudes and the relationship between motivation and achievement were explored with additional studies targeting elementary school students' reading attitudes.

Assumptions

1. The participants being interviewed understood the scope of the study and that the interview questions were being asked by the researcher.
2. The interviewees responded accurately and honestly to all questions.
3. Interpretation of the data accurately reflected the intent of the participants as the themes were established by the researcher.
4. The methodology used and described in this record of study was logical and appropriate.

Limitations

Limitations of this study include the types and quantities of technologies available in each school. Each school has different devices and a different number of devices available for students; however, most have access to iPad® and Chromebook™ tablets for student use. Another limitation is that a library curriculum isn't available in this district for examining the consistency of information delivery. Librarians do have affinity group meetings that allow them to discuss the needs and wants of their school libraries, but these meetings serve as an idea platform, not as a universal curriculum plan. Not all schools have the same funds or access to additional monies allowing librarians to equip the school library with equal tools. Furthermore, school librarians have multiple responsibilities in addition to managing the library within their

school. Some librarians are the instructional technology contact on their campus, some hold classes during teacher conference times, and others schedule classes for students to visit, making it difficult, if not impossible, for the school librarian to meet and plan with grade-level teachers or to have technology resources available for teachers to use in their classrooms. An additional limitation in this record of study was in the low participation rate. Only eight of the 27 librarians participated in the survey and four of the five librarians participated in the interviews.

A convenience sample was used in this record of study. This sample is defined by Gall, Gall, and Borg (2007), as a group selected because they are easily accessible and available. This sample size produced limited data points. Assumptions were made through the generalization of information derived from both the online survey and the individual interviews. The generalizations were applied to this southeast Texas district only, creating additional limitations for this study.

CHAPTER IV

DATA ANALYSIS AND RESULTS

Survey

Novak (2014), suggested that the teacher-librarian is perfectly situated for demonstrating digital technology and showing how this technology can be integrated into school curriculum. Doiron (2011), implied in his research that the teacher-librarian may face a challenge with creating an e-reader curriculum component in a school and that the teacher-librarian might be experiencing pressure to integrate that technology into a reading program. According to the AASL, an effective school library program is staffed with a certified librarian who provides a positive learning environment and offers resources to ensure a balanced educational experience for all students (AASL, 2009). This efficient and effective library bridges the gap between access and opportunity for all students. The AASL stated that in an effective library, the librarian assumes an instructional role for students, teachers, administrators, and colleagues and presents a balanced literacy program that includes both traditional paper books and literature presented electronically. This librarian survey was created to better understand how elementary school teacher-librarians view the use of e-books and e-readers in the school environment and to explore how the librarian job might be changing with the advancement of this digital technology. Through the lens of the Constructivist Learning Theory, e-learning abilities were examined within the responses of the school librarians from both the online surveys and the interviews in which they participated.

Twenty-seven elementary school librarians were asked to participate in an online survey about e-books and e-readers and their perceived effect on the way they perform their jobs. Of

the 27 librarians asked to participate, five declined, leaving 22 who agreed to take part and who were sent a hyperlink to complete the survey. Of the 22 who were sent the link, eight responded to the survey, with five indicating that they would participate in a follow-up face-to-face interview. In the eight completed surveys, not all questions were answered, and one participant skipped most of the questions.

The survey contained 14 questions with some having *yes* or *no* answer choices while other questions were open-ended, allowing for free response. The questions were about e-readers, the e-books loaded onto these readers, budgetary expenditures, student perceptions of reading, and limitations that might occur for the librarian (Appendix A). A synopsis of the findings is listed in Table 1.

Table 1

Survey Questions and Notable Findings

| <u>Survey Questions</u> | <u>Notable Findings</u> |
|--|---|
| 1. Does your library carry e-readers? | 3 of 8 responded—Yes |
| 2. How should e-readers be used? | 7 of 8 responded The librarians agreed that they should be used for reading but differed in the type of reading, academic or pleasure. |
| 3. Are e-readers used for academic reading or pleasure reading? | 3 of 8 responded The three librarians stated that they are used for pleasure reading, not academic. |
| 4. Where do you see e-readers in your library in the future? | 7 of 8 responded Although varied, all the librarians want to see more e-books in the library and use digital reading more. |
| 5. Are student comfortable using both electronic format books and paper books? | 7 of 8 responded 5 of the 8 stated that they felt students would use both media, with 2 stating they did not believe students would be comfortable. |
| 6. Does your library carry e-books in Spanish? | 5 of 8 responded Only one library carried e-books in Spanish. |
| 7. Does your library carry e-books that are ethnically diverse? | 3 of 8 responded Of the 3 librarians who responded, only one library had ethnically diverse books. |
| 8. Does your library carry e-books that are leveled for readers? | 3 of 8 responded One librarian stated that they carry books that are leveled. |
| 9. How will digital readers help to narrow the reading gap for the at-risk population of students? | 7 of 8 responded Over half, 4, of the librarians stated that they can help with additional availability of e-books for home use. |
| 10. What budgetary limitations do you face with e-readers in your library? | 7 of 8 responded All the librarians stated that the lack of district funding made it very challenging for them to add e-readers and e-books to the library. |
| 11. Will e-readers supplement or supplant paper books in your library? | 7 of 8 responded All the librarians stated that this form of digital reading would supplement the current library inventory. |
| 12. What factors influence your decision to purchase e-readers? | 8 of 8 responded The biggest factor noted by the librarians was cost. |
| 13. Where do you see the district curriculum heading about digital reading? | 7 of 8 responded The librarians were not aware of any initiative by the district to move toward digital reading. They stated that e-book and e-reader decisions are made by the individual campuses. |
| 14. How will the role of the librarian change with the advancement of digital reading? | 7 of 8 responded Six librarians stated that they did not think their job would change, other than having to learn how to help students and teachers with the devices. |

The first question in the survey asked the librarians if their library carries e-readers. The intent of this question was to determine the availability of e-readers in elementary school libraries. Three of the librarians who responded stated that they do carry e-readers, with four replying that they do not and one survey left blank for this question. This then led to the second question about how electronic devices are used in the library.

Question 2 inquired if e-readers are part of a child's literacy experience and how these devices should be used. Seven of the eight librarians responded to this survey question. The answers varied: one librarian was not sure and wanted to know how others would be using them. Three respondents stated that they should be used like books, for both academic and pleasure reading. The remaining three librarians stated that they could be used for story creation, literacy games, decoding skills, and searching for books, much like what a computer would do. According to the research conducted by Ertem (2010), e-books can improve and help reading comprehension. This finding concurs with the prior research of Grimshaw, Dungworth, McKnight, and Morris (2007), stating that e-books, with the features available, increase reading comprehension and enjoyment of books. Peters (2009), suggested that these new forms of reading (digital reading) could have a deep effect on libraries and librarianship by changing the way people read. The librarian responses concurred with this prior research in that they too feel that the electronic formats could help with student reading. This then led to Question 3 about reading engagement and the use of e-books for linear (pleasure) reading or tabular (academic) reading (Durant & Horava, 2015).

The next question in the survey asked, if e-readers are available, how they are being used by students in the library. Three librarians commented that they do have e-readers in their school, with two stating their use for pleasure reading and one stating their potential use for both,

but mostly their use for pleasure. During the librarian interviews conducted after the survey was completed, one librarian reported never having been asked to have textbooks on the e-readers, suggesting that only pleasure reading or reference-type e-books are used by the teachers for lessons. This concurs with a theme that surfaced during examination of the data that the availability of e-books for the e-reader does limit what the librarian can purchase for the school library. With a potential lack of funding and e-book choices, librarians face challenges when adopting e-books for their library (Harris, 2012). According to the librarians interviewed, most of their e-books are nonfiction and are used for either information gathering or pleasure reading during and after a library lesson. With mostly nonfiction e-books available in the libraries, librarians were then asked about plans for e-reading.

Question 4 inquired about the planned future use of e-readers and e-books in the school library. Seven of the eight participants responded. The answers were varied, with most wanting to have a few e-readers in the library and to have students using them more, with one librarian stating that their school would be adding more each year and wanting to see the e-readers used more by the students. All the librarians did report wanting more e-books for their library while also wanting to see more students using them. Lamb's (2015), research informed that the school library provides multiple resources for students and is a place where they can use books and have visual/audio materials available to gain information. The school library has expanded and evolved with the growth of technology in that digital alternatives for reading are likely to increase in popularity. School libraries need to be a part of this digital revolution and promote the use of e-books and e-readers (Peters, 2009). Valenza and Stephens (2012), stated that digital technology is helping students to become more engaged readers with the use of e-books and e-readers. The responses from the librarians suggest that they too believe in the future of digital

reading, but are limited in their ability to pursue this format. According to the AASL (2009), libraries should support the development of digital learning along with participatory learning, inquiry learning, information literacy, and technology literacy. Librarians were then asked if their students use both traditional paper books and e-books.

Question 5 asked about the term “ambitextrous,” which is defined as how students feel about using both paper books and e-books (Peterson, 2014). Students born in or after 2007 (the year of the Apple iPhone® launch) are growing up to be ambitextrous. Seven of the eight librarians responded on the survey, with 71.43% of respondents stating their feeling that the students of today would feel comfortable using both media and 28.57% of respondents stating their feeling that students would not be as comfortable. A study conducted to determine the preference for e-books or paper books by Woody, Daniel, and Baker (2010), suggested that students are not as comfortable using digital books as they are with paper books. Ferriter (2010), suggested that e-books and e-readers could become the norm in the K–12 classroom. More current research has not determined clearly if libraries should be all digital, have a mixture of e-book and paper books, or simply be all paper. The responses from the participants indicate that both traditional paper books and e-books are needed for the elementary school library. The AASL (2009), has contended that the school library, in conjunction with other schools and community partners, should expand and improve resources to meet the needs of all students, regardless of whether they are in an electronic or paper format. This then led to Questions 6, 7, and 8, which asked the librarians how they feel they should equip their library with materials.

The next three questions inquired about the types and diversity of e-books available for devices used by students when reading and if these e-books are available in different languages and different reading levels. Four librarians responded that they do not carry e-books in Spanish

or any other language, only English. However, one librarian did state that their library carries Spanish e-books. Three responded to the question on culturally diverse books, with one librarian carrying books with diversity and two not. When asked about leveled reading books for activities such as guided reading groups, three librarians responded that they do not carry leveled reading books for group work, and one responded that they do. Harris (2012), stated that it is difficult to purchase multiple copies of e-books for use in guided reading groups. This concurs with a recurring theme from the librarians in that materials for electronic devices are limited, and it is a challenge to equip the library with the resources needed to meet the needs of all learners. The librarians who were interviewed and who do have e-readers and e-books stated that they only buy e-books that are multiple-use, meaning they can place the e-book on multiple devices. The lack of availability of e-books can be a barrier for librarians to overcome. With student reading attitudes and motivation declining (PIRLS, 2007), there is a need for e-book diversity to pique student interest. These responses confirm a recurring theme involving e-book availability and diverse digital materials in the library.

Without a curriculum to follow and the purchase of limited materials left to individual campuses, inadequacies among campuses occur. This was another recurring theme identified through the survey and interview process. No two libraries where the interviews took place have the same resources or the same amount of funds needed to supplement the library. School and school districts need to provide funding and support to the libraries in this ever-changing learning environment (AASL, 2013). In this data-driven, assessment-focused global society, demonstrating a financial commitment to the school library program can keep schools equitable and supplied with the necessary resources to maintain a rich education environment for both

students and staff (Boehm, 2009). This difference in the school libraries led this researcher to believe that students are not exposed to equal learning opportunities.

Question 9 asked if digital readers can help narrow the reading gap in an at-risk population of students in the school. Seven of the eight librarians answered. The responders again had a varying range of opinions. Most of the librarians (57%) reported feeling that they can help, particularly if there is at-home access. These opinions concur with prior research stating that at-home activities help improve reading skills of students (Johnston, 2015; Petscher, 2010; House, 2007). One librarian reported feeling that they might help at first, but when the novelty wears off, the device will not make a difference. Per Rhodes and Milby (2007), integrating digital technology into the classroom curriculum raises the achievement levels and successes of literacy learners. These researchers further stated that the features offered with digital readers help students to better access classroom material, which helps to improve fluency and comprehension. The features offered in many e-books could help struggling readers and could help narrow the reading gap with at-risk students (Korat & Shamir, 2006). This earlier research of Korat and Shamir stated that the features of e-books have the possibility to support literacy and language development in children, especially for those in lower-income families. Digital readers can help support struggling readers using the tools and features offered by these digital devices (Larson, 2010). When research demonstrates that e-books and e-readers do help struggling readers, librarians now face a challenge of getting these devices into the library. Another recurring theme became transparent through the interviews and survey process. The lack of funding was often cited by the librarians as limiting them in what they can supply in the library. All librarians stated during the interview process that they watch their expenditures closely from the money they raise.

Question 10 inquired about budgetary limitations librarians are faced with when purchasing materials for the library. Seven of the eight participants responded, with all stating that the library budget is very limited and that most of their funding comes from book fair fundraisers or grants they have obtained. The librarians stated that e-books and e-readers are expensive, and with little or no help from the district supplementing their budget, these devices are not a high priority. This concurs with Doiron (2011), who stated that budgets can cause limitations for librarians when purchasing e-books and e-readers. Prior research has determined that there is a positive correlation between student achievement and a clearly functioning, well-supplied school library (McCracken, 2001). School libraries must have adequate funding to help meet the needs of all students, regardless of their reading aptitude. All librarians interviewed concurred that the lack of funding causes inadequacies across the district.

When asked about e-books supplementing or supplanting paper books (Question 11), seven librarians responded, with all stating that the e-books would continue to supplement the books currently in the library. Cost was again noted as a factor for their decisions. A survey of librarians in 2001 confirmed that a reason why many librarians are not embracing a move to more digital technologies is simply a lack of money (Miller, 2011). With funding cited as a hurdle for the librarians, the next question in the survey inquired about additional challenges that might influence a decision to purchase e-books and e-readers.

Question 12 asked what factors might influence the librarian's decision to purchase e-books for the library. All eight participants responded. Most participants cited money and their budget restrictions as the main influence in purchasing or not purchasing e-books and e-readers. Some stated that home access and interest levels of the books also influence their decisions. This concurs with Johnston (2015), Petscher (2010), and House (2007), in that home access is an

important element needed in a student's reading instruction. Additionally, the librarians reported wanting e-books that support the school curriculum. As previously noted, most e-books in the school libraries are nonfiction and used for pleasure reading. At the time of this record of study, no curriculum textbooks were available on e-reading devices.

Question 13 was aimed at the direction of the district regarding the use of e-readers. Seven of the eight librarians responded. Most librarians stated that the decisions surrounding e-readers and e-books occur campus by campus. One librarian stated that if the district wants to see this technology grow, they will need to fund the growth. Another participant stated that they do not have enough information on the subject, but did allude to schools needing more money to purchase e-books. The previous questions were about e-books, e-readers, and how they are used or intend to be used in the elementary school library. The next question was directly related to the job of the elementary school librarian.

Question 14 asked how digital readers change the role of the school librarian. Seven of the eight participants responded. Most participants reported them not changing their role as a librarian very much. It would take more time to train students and teachers how to use and access the devices, stated one librarian. Another stated that it would give them more time to read with students and have more resources for students. Lastly, one librarian stated that this is just another part of the job and she would select proper books for the school library, whether it was in paper or electronic format. These statements are not agreeing with the prior research of McCracken's (2001), who suggested that the role of the school librarian is changing and they are experiencing pressure to add more technology to the school curriculum. No librarian expressed that they are under any pressure to add digital reading to their library.

The final question solicited the participants to see if they wanted to take part in a face-to-face interview. Seven responded, with five stating they would participate. These five librarians were contacted for an interview using the librarian interview questions in Appendix B.

Interview

Five librarians within this southeast Texas school district were selected to participate in the face-to-face interview process. Of the five, four did participate and are coded Librarian 1, Librarian 2, Librarian 3, and Librarian 4. Each librarian was asked the same questions from the Librarian Interview document (Appendix B). There were 10 questions, and each librarian could answer as little or as much as they chose.

Librarian 1 is from a school with approximately 800 students, with an ethnic population of 54% White, 25% Hispanic, 16% African American, and 5% Mixed or Other Race. This school has an economically disadvantaged population of 12.2%, and their English-language learner (ELL) population is 2.3%. This librarian has been in the current school for five years and has performed the job of librarian for seven years. With a certification in library science, this librarian is also certified to teach English in grades 6 to 12 and reading in grades 4 to 8. Prior to performing the job of librarian in this current school, this librarian had taught seventh grade English Language Arts for eight years. The grade levels in this school range from kindergarten to fifth grade. This school is in a newer neighborhood within a more affluent housing market. According to the librarian, this school supports a large Parent-Teacher Organization (PTO) that is very active in the school and in the community.

Librarian 2 is from a school with approximately 480 students. This school has a less diverse population, with an African-American population of 4.6%, Hispanic population of 26.7%, White population of 62.8 %, and the remaining population listed as Mixed with Two or More Races.

This school has 31.9% of the student body listed as economically disadvantaged and an ELL population of 6.5%. This librarian has been with this school as the librarian for 21 years. In addition to having a certification in library science, this librarian is also certified in elementary instruction with a specialization in reading. Additionally, this librarian carries a degree in psychology. Prior to beginning the role of school librarian, this individual taught in a third-grade elementary classroom for five years. This school has a small prekindergarten program, with most students enrolled in kindergarten to fifth grade. This is a well-established neighborhood school in a slow-growth area of the district. The total student population has been slowly decreasing overall, while the Hispanic population attending this school has been growing.

Librarian 3 is from a school with about 600 students. This school has a diverse population and is classified as a Title I campus, which is based on having at least 50% of the student population enrolled in a free or reduced lunch program. This school's demographics list an African-American population of 35.1%, Hispanic population of 54.6%, White population of 7.8%, and the remaining population as Two or More Races. This school has an economically disadvantaged population of 83.0% and an ELL population of 29.7%. This school is in an established neighborhood that is somewhat transient, with lower-income housing. This school offers a bilingual program for Spanish-speaking students. Librarian 3 did not provide additional information about past teaching history, certifications, or other personal facts.

Librarian 4 is from a school of approximately 725 students. This is an economically diverse campus, with 19.7% African-American, 45.9% Hispanic, 29.0% White, and the remaining population listed as Two or More Races. The economically disadvantaged population is listed as 46.1%, the ELL population as 19.6%, and the at-risk population as 47.9%. This librarian has been at the current school for 14 years and has been the librarian the entire time. In addition to a

certificate in library science, this librarian holds degrees in elementary education as a K–8 teacher, a certificate in counseling, and a certificate for principal. This librarian has spent time in the classroom as a teacher and as a building counselor. As stated by the librarian, this school is in a community that is established and is supportive of the school, but parent participation in school events can be challenging.

All the librarians are from the same school district in southeast Texas. A three-year snapshot of the district is outlined in Table 2. As the district is growing in student population, the demographics of the district are changing. The African-American and Asian populations are remaining steady, while the Hispanic population is experiencing growth and the White population is in decline. The ELL population is growing, and the economically disadvantaged population appears to fluctuate. The district continues to meet TEA requirements to be classified as a district that has *met standards* as measured by the STAAR examination. The librarians' individual schools are diverse in their student populations, as outlined in Table 3. Additionally, the schools vary in the number of students, in their neighborhood locations, and in ethnicity and socioeconomic status.

Table 2

District Snapshot

| <u>District Demographics</u> 2015–2016 | <u>Ethnicity</u> AA 19.1% Hisp 34.1% White 40.9% Asian 3.0% | <u>ELL Population</u> 8.8% | <u>Economically Disadvantaged</u> 33.9% | <u>Attendance Rate</u> 95.8% | <u>Academic Performance</u> 2016 Accountability Rating: Met Standard 2016 Special Education Determination Status: Meets Requirements | <u>Total Population</u> 40,427 |
|---|---|-------------------------------|--|---------------------------------|--|-----------------------------------|
| 2014–2015 | AA 18.7% Hisp 33.0% White 42.4% Asian 3.0% | 8.7% | 33.4% | 96.0% | 2015 Accountability Rating: Met Standard 2015 Special Education Determination Status: Meets Requirements | 39,371 |
| 2013–2014 | AA 18.6% Hisp 32.0% White 43.5% Asian 2.9% | 8.6% | 34.5% | 96.0% | 2014 Accountability Rating: Met Standards | 38,056 |

Table 3

Individual School Information

| <u>School</u> | <u>Size</u> | <u>Demographics</u> | <u>Economically Disadvantaged</u> | <u>Attendance Rate</u> | <u>Academic Indicator</u> |
|------------------------|-------------|--|-----------------------------------|------------------------|---|
| Librarian 1 | 800 | AA 16% Hisp 25% White 54% Other 5% ELL 2.3% | 12.2% | 97.1% | 2016 Accountability Rating: Met Standard Distinction Designations: Top 25 Percent: Student Progress |
| Librarian 2 | 480 | AA 4.6% Hisp 26.7% White 62.8% Other 5.9% ELL 6.5% | 31.9% | 96.3% | 2016 Accountability Rating: Met Standard Distinction Designations: Top 25 Percent: Student Progress |
| Librarian 3 Title I | 600 | AA 35.1% Hisp 54.6% White 7.8% Other 2.5% ELL 29.7% | 83.0% | 96.5% | 2016 Accountability Rating: Met Standard Distinction Designations: Top 25 Percent: Student Progress |
| Librarian 4 | 725 | AA 19.7% Hisp 45.9% White 29.0% Other 5.4% ELL 19.6% | 46.1% | 96.3% | 2016 Accountability Rating: Met Standard Distinction Designations: Academic Achievement in Mathematics |

The librarian interview document was designed to solicit information about the individual school, the librarian's connection to technology, district support, and the overall challenges the school librarian may be facing with the rapid growth of technology. Some questions were designed to solicit more in-depth information than was gleaned from the librarian survey. Other questions were based on prior research involving e-books, e-readers, and elementary school librarians.

Interviews consist of oral questions asked by the researcher with oral responses given by the interviewee (Gall, Gall, & Borg, 2007). According to Schwandt (2007), the interview process is a direct means to gain access to interviewee expertise. Using this question-response method, the interviewer aims to ask the right question to produce a genuine and meaningful response from the interviewee (Schwandt, 2007). The interviewer remains neutral during the interview event. Schwandt stated that interviews are generally classified into two types, structured, which are closed, forced-choice responses, and unstructured, with open-ended-response questions. The interview questions in this record of study were open-ended, allowing for a more natural response.

The librarian interviews were conducted individually in the librarians' own schools, and the researcher audio-recorded the responses and took notes during the process. The interviewer was in control of the response situation, with each participant agreeing on a time and place for the interaction. The pace and sequence of questions were controlled by the interviewer, who followed an interview protocol as defined by Gall, Gall, and Borg (2007). In qualitative research, there are three basic approaches used for data collection through open-ended interviews. They are the informal conversational interview, the general guide approach, and the standardized open-ended interview (Gall, Gall, & Borg, 2007). The latter protocol was used,

with a predetermined set of questions delivered by the same researcher to each respondent. This protocol was used to reduce the variation in responses that could occur with multiple interviewers. The data obtained from this protocol type are systematic and thorough, however, the process can reduce the flexibility and spontaneity of the interviewer and the interviewee (Gall, Gall, & Borg, 2007). A summary of the responses is outlined in Table 4.

Table 4

Interview Questions and Notable Findings

| <u>Interview Questions</u> | <u>Notable Findings</u> |
|---|--|
| 1. Do you face challenges between choosing between e-books and traditional paper books? | The librarians do find challenges in spending their funds on e-books due to cost. They all choose e-books that can be used on multiple devices. All the librarians do continue to purchase paper books for their library. |
| 2. Is there a challenge when trying to purchase e-books for school activities? | Pricing, purchasing, and quantity are concerns for the librarians. The money for the library comes from grants and fundraisers. Capstone Interactive is the vendor of choice to purchase multiple-use e-books. |
| 3. Do your special education students have access to e-readers and e-books and do they take advantage of the built-in features? | The librarians do not interact with the special-needs population individually; they see them with their classroom. Specialized teachers such as the dyslexia interventionist do use the e-book and the features offered within the books. |
| 4. Is the availability of e-books for electronic devices adequate to meet the needs of your students? | The choices are limited and the librarians choose carefully. There are more nonfiction books than fiction books offered electronically. |
| 5. Are there district plans to promote reading in an electronic format? | The librarians do not know of any plans for the district to move forward with digital reading for elementary school libraries. Decisions about the library are made by each campus to meet the needs of the school. |
| 6. Do e-readers and e-books compete in the electronic world where students spend so much time? | The librarians agree that they do compete, but they would like to see more students asking for and using e-books and e-readers. The librarians believe the features offered by the e-books help motivate students to read. |
| 7. How is the library curriculum addressing the needs of at-risk students to reduce the achievement gap? | There is a conscious effort to purchase books that meet the needs of all students. In general, the librarians try to make all students better readers, which should help close the achievement gap. |
| 8. What are the current plans for using e-books and e-readers in the elementary school library? | There are currently no plans to add e-readers to the library; cost was cited as the main factor. The librarians are going to add e-books at a slow rate to help supplement the paper books in the library. |
| 9. How do you see your job changing due to the influx of electronic media? | The librarians agree that this is part of their job, and the biggest change will be in learning to use the devices and then teaching the students and teachers how to use them. The librarians are not feeling any pressure to change or adopt an e-learning platform. |
| 10. Do you have any closing thoughts in regard to electronic devices and the job as librarian? | The ending comments by the librarians stressed the excitement of electronic media in the elementary school library. Their biggest concern is in funding for the library and the amount of material available to them for supplementing the library. |

Question 1 was designed to inquire about choices librarians make when faced with the task of purchasing traditional paper books or e-books for their library. Based on literature studies by Doiron (2011) and Miller (2011), a mixture of paper books and e-books could be most useful in the elementary school library. The responses among the librarians varied, with Librarian 2 and Librarian 4 agreeing that the choices are difficult. The difficulty noted by the librarians is in the challenge to obtain funding and in the selection of books that are offered electronically.

Librarian 2 shared the following: “I must decide carefully what I'm going to buy. I write grants because I know if I don't, I am not going to have enough money to buy books.” Librarian 2 went on to share the following: “I usually buy e-books from Capstone Interactive because the person who is our representative almost always will match funds on what I buy.” Librarian 4 stated, “I think it is challenging, period. Because we do not have a lot of money and I find it difficult to choose between the paper books and the e-books.” This librarian also stated:

Every book I choose to buy are multiple-use [able to load on to multiple devices], so anyone who wants to read that book can. The e-books with multiple use is a selling point for me, so those are the ones I choose. That way, they [the e-books] are available to everyone who has access to the Internet.

Statements from the other librarians were similar, but concentrated more on the electronic devices rather than the e-books.

I try to keep a balance of what I buy between the e-books and the regular paper books. I have a few Nooks [e-readers], but mostly we have iPads for the primary grades, and we have Chromebooks that are new for the older students. Additionally, we have five computers that the kids can use in the library. The computer lab has a lot more.

Librarian 3 reported being in the beginning stages of moving to e-books in the school library:

Well I got a grant to buy e-books. Currently we have about 14,000 books and 60 electronic books, which of course shows that we don't have as many e-books in the library, but we are just getting started with the e-format. It's not balanced, it's not equal, but it's a supplement for the library.

When interviewing Librarian 1, it was noted that this library is not experiencing the need to move to e-books and e-readers:

I think with the elementary school students, I think they like the paper books better. I have a couple students that bring their e-readers, but I don't feel much pressure that the kids are wanting me to move to the e-readers.

The other librarians concurred with this statement in that they are not experiencing the need to move toward e-books; they do agree that electronics are a part of everyday life for their students, but not necessarily the need for this reading format.

As a group, the findings under this question suggest that the librarians perceive that there exists an inadequacy in funding such that they must often resort to fundraising and grant-writing to secure library funds. All four librarians agreed that funding for the library is insufficient.

Doiron (2011), confirmed that budgets can be major limitations for libraries attempting to add e-books to their inventory; however, his research also suggested that traditional books will always be a part of the library and that the librarian needs to include e-books to accommodate users of technology while utilizing new technology that might come along. Doiron stated that these new technologies must be embraced to motivate young readers. A survey conducted by the *Library Journal* also confirmed that budgets and lack of money are contributing factors to some school

librarians not moving to digital readers (Miller, 2011). This information led to Question 2 and the opinions of the librarians on purchasing electronic materials.

Question 2 sought information about the purchasing and cost of e-books for e-readers. All four librarians use the same vendor, Capstone Interactive, to purchase many of their e-books. The librarians selected this vendor due to matching funds being offered, which helps them purchase more, as well as the availability of multiple-use books that can be installed on multiple devices for one set price.

Well I have, we have, a vendor, Capstone, that I use, and I buy almost all my e-books from them. They have a program where you buy the e-book for one set price, and it can be loaded on as many devices as you want.

Librarian 1 stated the above, with Librarian 2 making similar comments:

This is one of the reasons I choose Capstone Interactive—because I only purchase e-books that have multiple use. I do not purchase any single-use e-books. There is something just recently that I haven't experienced before—the representative who sells this product likes to come to our librarian meetings where he talked about this new product that I did like—you get a book and e-book, which is \$40; this is not much more than the Capstone vendor, but you get the e-book that is multiple-use and you get to keep the paper book, too.

The other librarians use this vendor as well, and they use the e-books on the library computers.

Librarian 3 stated:

They can be loaded on the computer; you can have one book loaded onto each computer so 14 people can read it at the same time. Mine are the ones [e-books] from Pebble-Go

books, which I believe is the name of the company. My experience is that I can load them onto multiple devices, not just the single device.

Librarian 4 reported not experiencing a challenge with the e-books being on multiple devices: “I have 14 computers; all the students have access to any of the books online, so it’s not a problem in the library.”

Harris (2012), indicated that it is difficult for the teacher-librarian to purchase multiple copies of a book for reading groups, causing a less-than-ideal situation for schools. The difficulty is in the vendor not offering a wide selection of e-books and charging the purchaser per device. The librarians interviewed did not appear to be experiencing this challenge. Harris (2012), also noted that group pricing for e-books is not always available for schools. This finding is not consistent with the librarians interviewed; however, the librarian survey and interviews continued to highlight money as a factor keeping libraries from purchasing e-books and e-readers. With the librarians purchasing e-books that are for multiple devices, they are not in agreement with the research of Harris that it might be difficult to find multiple copies for reading books. The librarians’ responses do concur with other prior research that money can be a barrier for adding e-books and e-readers to the library inventory (Miller, 2011; Harris, 2012; Huysmans, Kleijnen, Broekhof, & van Dalen, 2013).

Question 3 was formulated to gain information about the school’s special education population and if e-books and e-readers are available to this group of students. Per these librarians, all four schools have special education programs. The programs, referred to by the librarians, are Applied Skills, Life Skills, and General Special Education, which includes Speech, Visually Impaired, Physical Therapy, Dyslexia, and Dysgraphia. Applied Skills and Life Skills are specialized programs for more severely handicapped students, both physically and mentally.

These programs generally have the most restrictive settings for students. Preschool Program for Children with Disabilities (PPCD) and Steps Plus are introduced at the prekindergarten level. PPCD is specialized programming for students before entering kindergarten. Steps Plus is a program for autistic students.

Rhodes and Milby (2007), conducted research on technology supporting readers with disabilities and concluded that e-books are an effective instrument for students with disabilities to build capacity in fluency and comprehension. Harris (2012), stated that an area of great potential for e-books is in accommodating students with special needs. Guernsey (2011), published an article in the *School Library Journal* suggesting that e-books should be a specific part of a child's early literacy experience.

The school of Librarian 1 has:

Life Skills, some schools call it differently, but these are some of our most needy students; we have two classes of Life Skills. Prekindergarten is new this year, and we have some regular education kids and some special education kids in that classroom; I believe it is called PPCD. Some are district employees' kids, and we love having them here. Then just General Special Education students like any other school would have. Librarian 2 reported a similar population: "We have the General Special Education population and the little guys, two- to three-year-old students, PPCD, and we also have the Step Plus program for students with autism and the Applied Skills program." According to Librarian 3:

We have special skills students and they are into it [e-books]. The special education program is different than the special skills. Those are the two programs that we have here. There are the General Special Education students and the special skills are the Life Skills and Applied Skills students.

Librarian 4 stated, “We have PPCD, Life Skills, and the General Special Education.” Special education programs are in all schools in this district, but not all schools have the same programs. Larson (2010), stated that digital readers show promise for struggling readers using the tools and features offered by the devices. She noted that font size options, text-to-speech features, and a built-in dictionary are some of the most promising tools that can help in the reading process. Harris (2012), echoed the same usage for digital readers, stating that these devices prove to be very successful with struggling readers through the feature of a single-page display. Harris also suggested that a great potential for e-books in the school library is in meeting the needs of students in a special education program.

Using technology has been shown to be useful with hard-to-reach learners and supporting students with special needs. Technology has given the learner more opportunities and choice about how and when they choose to learn (Robinson & Sebba, 2010). According to Ciampa (2012), there is growing evidence that computer-assisted reading instruction has a positive correlation to reading motivation, especially for students who are struggling with reading instruction.

When asked if the students have access to the e-books and e-readers, each librarian made similar comments in that they, the librarian, do not have much interaction with the special education population, but other teachers who use the library resources do. Librarian 1 stated:

Oh, probably not, because like I said, the teachers use the iPads, but I don't know if they use the Kindle apps; that is something I should ask them. Our e-books, the ones on the computers, do read to the kids; the e-books on the computers in any collection have that feature it can be turned off if needed. I think the e-books also have the feature where you can click on a word and it will give you a definition. And I do know one of the resource

language arts teachers does use the e-books and has the e-books read to the children. But I think she just uses a regular computer, not an iPad or a Kindle.

Librarian 2 made similar comments:

Well, not at this school so much; I do encourage the use of e-books, but I do not work with the special education population myself, I am only with them when their whole class would come into the library. Our Dyslexia teacher does use them and has for several years; she uses the library resources including e-books for her fluency lab.

Librarian 3 made the following comments: “Yes, they are thrilled with the e-readers and they are using them for independent reading. They do use them and have access to them.” Librarian 4 also echoed the use of e-books for their special-needs population:

They all have access in the classroom; every desktop has access to all of my e-books because it’s through an online source. Our district does “Ally” and I’m not sure of the name, but it is specifically for students with learning disabilities and they have access through the special education department. I don’t know too much about that, but students who are dyslexic can use them at home. It comes with great literature, and they have access to almost any book, but I don’t use them in the library. I don’t use them in the library because I use the programs that are for every child; these others are just for special education students.

This district program is called “Epic” and can be found through “Get Epic” or the epic app. According to Librarian 4, this is an online source of reading material for special education teachers for reading. There are multiple reading levels, chapter books, and picture books offered through this online source. Students have their own login to access the books, and the device

they use keeps track of where they left off reading. This program is only available on the iPads in this district.

Whereas all four librarians have e-books available for students, they do not use them specifically for special-needs students. The district does offer specialized programs for special education students that may or may not involve the use of e-books or e-readers. Additional research could be useful in determining the extent of e-books available for special education students and their effect on reading. E-books have the potential to expose multitudes of new teaching and learning possibilities as new literary skills are integrated into these digital devices (Larson, 2010).

Question 4 was directed at the availability of e-books for school libraries and electronic devices. All four librarians reported caution in purchasing e-books, and they agreed that most of the e-books on the market are nonfiction. Librarian 2 wants to have more fiction, Librarian 3 has only nonfiction, and Librarian 4 stated that their library has a mixture of both. Librarian 1 conveyed:

... this is one of the reasons I haven't bought them. Some of the librarians who have them say that you buy a book and it's only good for that year. Why spend my money on that because I don't get any state money or district money or even school money? I only get what I fundraise, which is great in a way because at this school we get parents who do buy a lot of books for their kids, and I get to spend on books that I want. I look at buying e-books and see if it is cost-effective. I examine the pros and cons, like you could buy a hardback book that will last rather than only having it for a year. I think the kids like holding a book. I get, we get, new books and we like to smell and touch the new books. We get excited about the new books. We have a few kids that bring their Kindle and of

course sit and read that. I use my Kindle and I love it, but I don't know if all the kids will. The younger ones are still so tactile in their learning that they just like turning the pages and feeling the weight of the book.

Librarian 2 commented:

Definitely, the only thing I wish they had more of are the fiction books. When I go to the vendor Follett, I get more of the nonfiction books; the fiction books are somewhat more limited. I like to choose e-books that allow me to place them on more than one device or computer. So, for instance, if I wanted to buy a Bluebonnet book, they are not available from my multiple-use vendor. If I go with Follett, they probably are available, but they would almost certainly be a single-use and I don't like those. So, I am probably not going to get those. There are lots of nonfiction books available; the majority are nonfiction. I made sure I had books that were for younger kids, mostly because the ones I like for them are multiple-use and interactive, which fits the needs of the younger kids better. You can get an e-book that is just the book; that's all it is. All my Capstone e-books are Capstone Interactive e-books, which can read to you or not; it's your choice. You can pause each page, you can read as much or as little as you want. I have a lot of nonfiction; I think I do have some 2016 copyrights in my inventory. The interactive component of the e-books is why our Dyslexia teacher likes them so much.

Librarian 3 follows this same line of thinking:

We are looking at them and we do think they are limited in their selection. The range needs to be broader; the biographies were old people mostly, not the people younger students can identify with. We have all nonfiction e-books; we did not get any fiction books for the e-readers.

Then this Librarian stated:

I do feel we need more fiction books, but I will choose carefully. I find that many companies offer one use e-books and that does not fit the purpose that I have. There are some vendors that have a year-long use program where you have the e-book for that amount of time, but then they go away and that's not the best use of my funds. This is why I like Capstone Interactive so much; you buy it once and it's yours forever with multiple use. We have a mixture of both fiction and nonfiction books for our students in the library and I would want the same for the e-books.

Peterson (2014), stated that a challenge exists for school libraries in the expansion of their e-book collection while still maintaining their paper book collection. Factors such as a lack of e-reading devices, no demand, lack of technical support, and no money add to the slow adoption of digital books (Miller, 2011). This concurs with the statements of the librarians that students still want to hold traditional paper books, their attempts to be fiscally wise with the money they spend on books, and the students not pressuring them to add e-readers to the library. Money appears to be the most dramatic factor in librarian decisions to add electronic resources. The lack of district funding and the inconsistencies that occur with fundraising present a challenge for the school librarian when it comes to purchasing e-books or traditional paper books. Money and the library budget are trends that continued to surface throughout the interview process and in the survey results. Lack of funding creates a barrier for the elementary school librarian, and research has demonstrated that there is a positive correlation between a well-funded school library and student achievement (McCracken, 2001).

Question 5 was designed to inquire about district or school plans to integrate e-books and e-reader technology into the library curriculum. Prior research by Johnston (2015) suggested

that the job of the school librarian and the school technology specialist are being blended due to the rapid advancement of technology. This study stated that librarians can be school leaders in the advancement of technology based on pedagogical expertise and their knowledge of the school curriculum. Additionally, the librarians in this study were asked to comment on if they feel pressure from administration to integrate more technology into the curriculum. All four librarians conveyed that they do not feel or receive pressure to integrate technology. There are differences in how technology is embraced on each campus. Librarian 2 is well-versed in the process of buying e-books for the library and actively encourages other staff members to use the technology that the library offers. Librarian 4 is not very comfortable with technology. This school has a technology specialist who helps with and takes the lead on curriculum integration.

Librarian 1 answered:

No, other than just in the last year when we really focused on buying e-books for the library. The students that have the availability of the e-books can read them on the iPad or the Kindle or anything that has Internet access. So that is kind of what we are focusing on, just adding to the e-books. The district does not give us any money so it is nice that they let the campus decide what to spend their own money on, so I can do what I like to with the money the school raises.

Librarian 2 commented:

I do not feel any pressure. I don't feel any at all. Maybe that's because I am doing it; I promote the use of technology and I have e-books in my library. There are schools, I found out when I wrote my grant, that have zero, another school had less than 10, so I don't know if they were feeling any pressure. Certainly, as I said, I am not because I am

doing it. The district leaves it up to the school to decide what to do and have in the library; that's why I say no.

Librarian 3 reported a similar sentiment:

Our reading coach got a grant for Nooks, so I don't know how many we have in our school, maybe 20 of these e-readers. I'm not sure how many books she bought, but she bought a lot of books to load on them. She uses them for guided reading, not independent reading; we have not gotten that far yet. So, we have some plans for our school, but it is our plan, not the district's.

Then Librarian 4 explained:

They are working on that. There is a technology specialist at our school, and I think at most schools, to help integrate technology into the classroom. Our specialist heads that up for this campus. She takes the lead on that. She does a lot of the integration of electronics into the curriculum; we try to work together to do it, but she does all the integration. I think the district wants us to incorporate it, but I don't think there is a specific push to do that. It's more like, if you are doing that, integration, they want to know if it's working and the purpose of the technology. I see it more as an option, not a push. I do not feel pressure to integrate the e-readers or e-books into the curriculum. There is not a district library curriculum to follow. We use state standards, but every library is different and the structure of the library is so different that it looks different on every campus.

It has been shown that teacher-librarians who plan with teachers have a direct and positive impact on student learning (Morscheck, 2010). It also has been noted that an impediment to this collaborative effort is a lack of time for the teacher-librarian to meet with

teachers due to other duties assigned (McCracken, 2001). Even though Doiron (2011), suggested that librarians are experiencing pressure to integrate technology into the school curriculum, the librarians interviewed in this record of study do not appear to confirm this hypothesis. In fact, these librarians experience the freedom to choose how much or little technology integration they have in their library. Time and interest appear to be contributing factors slowing the integration of technology; however, teacher-librarians should be embracing new technologies to motivate readers in this age of technology (Doiron, 2011). According to AASL (2013), the collection of e-books and e-readers will remain in a transition period as the school librarian balances the selection of devices and the formats offered to patrons.

Question 6 was directed toward reading engagement, reading comprehension, and fluency as related to e-books and e-readers. In a study by Grant (2004), it was noted that e-books help students with word recognition and vocabulary. This researcher also stated that e-books can be an additional tool used to increase reading proficiency, aid in reading comprehension, and promote fundamental strategies needed for reading. According to the position statement released by the AASL, a responsibility of the school librarian is to endorse reading instruction, develop reading comprehension strategies in students, and promote free independent reading (AASL, 2009).

All four librarians reported believing that reading comprehension and fluency are related to engagement, but they varied on how technology is used to help engage the reader. Librarian 1 stated:

I do think so in that a lot of my struggling readers, I have full rotation, so after they check out their book, they can sit and read a book, or they get on e-books. I have noticed some kids who won't read a book, but they will sit and listen to a book that is being read to

them or read by the computer. So, I do think it helps with kids to have an option to have the book read to them; I think it's helpful. It keeps them more engaged.

Librarian 2 responded with a more personal answer and opinion:

I am going to give you a personal answer to that—so personally I love my e-books and I love paper books too. Mostly because if I didn't, I probably wouldn't be a librarian. I probably have about 400 or more e-books on my phone and I have a Nook. Also, since I have the app on my phone, I can get Kindle books too. So, I have a lot. Any more these days, if I am not reading to the kids, I am reading for myself, and I read on my phone, from my Nook, and from traditional paper books. One reason I like the e-format is that I can make the text really big and that makes it easier for me to read. At night, I can have all the lights off and still be able to read from my device.

Librarian 3 responded:

Yes I do, because you see the visual as you read and you can hear it. I know in videos and games you are moving around, but you are still getting the words and the sounds, which is the process of reading. So, yes I do think they can compete.

Librarian 4 agreed with the other librarians:

I think it can. I think we have to encourage students to use it. If they, the students, find out they like it, then they will use it. It's just like reading a good book; you could choose a video game over the book, but if it's a book you really love, then they will choose the book over the game. I model and show the students reading when they come to me. I try to show them the e-books we do have and introduce it and the features it has. If you just talk about it, somebody is going to like it. You are not going to get every student every

time, but you just keep trying to talk across the genres. When we talk about the e-books and get excited about the stories, it gets the students excited and interested in reading.

Grant (2004), noted that a student's word recognition and vocabulary increase with the use of e-books. Students with a middle or low socioeconomic status have been shown to have improvements in word meaning with the use of educational opportunities with e-books (Korat & Shamir, 2006). Additionally, word recognition and syllabic skills also increase when using an e-book with instruction. The research findings from Aydemir, Ozturk, and Horzum (2013), stated that students using digital technology to read showed reading comprehension of students who use an electronic screen is positively correlated to student achievement. Reading levels are higher for students reading from a digital device than reading from a paper book.

School librarians must remain steadfast in maintaining the multi-faceted, equally important roles as leaning community leaders, instructional design partners, information specialists, reading advocates, and administrators of school library programs. They must also develop programs for learners that have 24-7 access to Web resources, have technology integrated into their learning, provide involvement in global projects, create benefits from broader learning outcomes, and show gain from school librarians collaborating with teachers to accomplish such goals. (Boehm, 2009, p. 51)

Question 7 was designed to solicit information about at-risk populations in school as pertaining to below-level readers. Additionally, the librarians were asked if their curricula and resources help to reduce the achievement gap that exists in these populations. Librarian 1, Librarian 2, and Librarian 4 reported making a conscious effort to purchase e-books that are ethnically diverse. Librarian 3 is aware of the reading gaps of the students in school and that

some populations need more help than others, but knows her job is to get all kids reading and to love reading. Librarian 1 stated:

Well, there are never enough resources, but you do make a conscious effort to buy books and materials that reflect different groups, ones that might appeal more to these groups. Every kid likes to see a book with a character who looks like them on the cover or on the pages inside, so we focus on that and especially buying the e-books so that the covers or pages have a character that looks like them, so I think it would be helpful with closing the gap. And there is no extra money to buy books for at-risk students to take home for the summer. It would be nice if we could have a book swap type of thing so kids could take books home for the summer. It would be nice if they could have their own device to take home with access to the e-books. Thankfully I have parents with students that might have outgrown the books they own and they bring them in to me. So, I just send an email to the teachers to send your kids who don't have books to me. I will say to the students, "Pick 10 books and take them home." I don't know if they will read them, but at least they will have something to take home.

Librarian 2 commented:

Well, if you recall, about 70% of my books, the e-books, are nonfiction, which are for everybody. So, I do try to keep in mind what our population is, and I do try to keep books on hand for those population, it just is hard because of the selection that is available.

This concurs with the findings of Harris (2012), in that the lack of e-books can contribute to the slow process of school libraries adopting an electronic platform for the library. Librarian 4 stated:

My goal is to touch all of them by showing them that there are all types of people in the books. I make sure I get a cross section of ethnicity, so I try to incorporate Spanish books, I have books with Hispanic characters, with African-American characters, with Asian characters; I just try to go across cultures so the students can see themselves in the book.

Librarian 3 conveyed this message:

I think technology is helping students to be better readers because they are seeing the words and hearing the words, so eventually it's going to make better readers. The only way to bring up reading scores is through independent reading. It's not what they do in the classroom, it's what they do with their spare time. It's got to be at school and at home.

E-books and e-readers have the potential to expose new ways to teach and motivate students in their learning (Larson, 2010). Traditional and yet-to-be-discovered literacy skills can be integrated to support student learning. Larson contends that digital readers can help support the struggling reader by using the multiple tools and features offered by these devices. All the librarians interviewed acknowledged that there is a reading gap between ethnicities, but they are finding it difficult to supply e-books or any digital materials matching the needs of these students. Cost and availability are again barriers facing the librarians. As stated by Rhodes and Milby (2007), and Harris (2012), e-books and e-reader features can help struggling readers, perhaps helping to bridge this achievement gap. This information then led to asking the librarians about the district plans involving reading and technology. Schools and school districts must be willing to fund and support school libraries in their efforts to adopt this powerful means of accessing information (AASL, 2013).

Question 8 asked the librarians if there are any plans, either by the district or by the school, to integrate e-books and e-readers into school libraries. All four librarians agreed that there are no plans, at least that they know of, by the district to add these devices to school libraries. The district did purchase Chromebooks™ for all campuses, but these devices are earmarked for other intentions, not for the school libraries. Without district funding, the schools rely on raising their own money for library purchases. Schools can spend the funds acquired as they wish if the school uses a district-approved vendor. Most of the schools are using money raised or received through grants to purchase e-books and traditional paper books. None of the four librarians interviewed have plans to purchase e-readers, citing cost as a prohibiting factor. Librarian 1 stated:

No, nothing at the district level. I haven't heard anything from other librarians either.

There are three schools who have the e-readers. They have students read them in the library, but they do not check them out to go home. The cost of loss is too great. There are just a lot of concerns around the e-readers and their use in schools. The schools do not follow any district curriculum; it is just what they work out on their own. The schools are working together.

Librarian 2 commented, "I'm not sure, and I have not heard of any district plans. Now when we meet as librarians, which is only two times a year, I love to find out what others are doing and get ideas from them." Librarian 3 made similar comments, "I don't think we have a plan. I know we cannot share the e-books between schools; once you get them they are for your campus only." Librarian 4 stated:

They are working on that. They, the district, started a plan last year where they were trying to put several devices into each classroom. They are not at one to one yet, but they

ordered Chromebooks™ for the older students and iPads® for the younger ones. So, they are trying to have at least three in every class and add more each year. Technology is being looked at and examined at the district level by a committee, but I don't know what the plan is.

Technology integration gives the teacher-librarian an opportunity to become a vital player in the teaching and learning process of students (Johnston, 2015). Whereas the teacher-librarian is one piece of this process, others must be involved, including the school district, to provide a meaningful and engaging learning experience for all students. Technology and the rapid change occurring around technology was a focus of this record of study. This study was implemented to see if such a rapid change is impacting the elementary school librarian.

Question 9 directly asked the librarians if technology is changing their job as a librarian. This is the question for this record of study—to examine if e-book and e-reader technology is changing the way librarians work. All the librarians expressed feeling that the integration of electronics isn't changing their jobs, but is more leading them in a new direction on how they do their jobs. All the librarians who were interviewed see this as an opportunity to learn. The role of librarian does vary between campuses, with some schools having the librarian more involved in technology integration than others. The librarians also agreed that this is an ongoing process, where some schools are further along in their use of e-books than others. Some campuses do not use any e-books where others have many. Librarian 1 stated:

You have to learn with them [the students]. You have to keep up with the technology, and you have to learn new ways to integrate the technology into what you are doing. I think they enjoy technology, but I think they also do enjoy a break from technology; and yes, whatever lesson or craft we are doing, the last 15 minutes is technology-based. I try

to find a Website or something to reinforce what we are doing. The students are engaged when using technology, and if it is something on the computer, it is something they will try.

Librarian 2 shared these thoughts:

Well, it kind of depends on the person; like I said, we are pretty much on our own at school; I want to stay up with things so I do. My Website is up and I keep it updated and current. If new things are available, I want them. I want Chromebooks so bad, but I can't have any because as of now, they are for other purposes. I want what is new and I want to keep up, which is really good for me because I think that has changed my job. Not all librarians in the district feel the same way. It is what I need to do, it is part of my job. I don't think there is a real push from our district or from our computer people to get the e-books into the library.

Librarian 3 stated:

It will take a long time to get as many electronic books as we have paper books and to accumulate as many different levels as you need. It will be hard to get enough books to serve the needs of the students.

Librarian 4 confirmed the sentiment of all the librarians:

It's an ongoing process because I am the librarian that believes my job is to get kids to love books. It is not about technology, but slowly it is changing. I love the e-readers, I love e-books, and I love the audio books. I am learning and I am introducing all that I learn to my students. I use audio books to teach students to listen, not pictures to see, just listen. With e-books, I often project them and we get to read the book as a class. Technology is actually a weakness for me; I rely on our technology specialist a lot and I

rely on the kids as well. They know more than I do and that's okay with me. I want them to produce a product using books, but they get to choose how they want to do that. Some schools have the librarian as the technology specialist, but I do not share that view. I think they, the jobs, are totally different. You can be a library technology specialist, but my goal is still to get my students to love reading and technology is not always a piece of that. It doesn't have to be a piece and I think it is separate and not all people agree with that. With students that are in school now to become librarians, technology becomes automatic, they have to use and integrate that technology in school; it is almost second nature to them. I think it will become part of the job, but I feel it really should be separate. What you have to do as a librarian does not always have anything to do with technology. Technology is a piece of my job, but it is not in the forefront.

Technology integration for learning is critical in preparing students for the challenges of the 21st century (Johnston, 2015). Technology brings a growth mindset to schools. This growth mindset brings positive beliefs about efforts and about academic habits and behaviors.

Technology integration of e-books and e-readers into the school curriculum can help narrow achievement gaps using features such as on-screen dictionaries and read-aloud capabilities (Larson, 2010; Harris, 2012). Novak (2014), contends that digital technology can be connected to the development of a love for reading. All the librarians interviewed have and use technology to some degree. Whereas technology is rapidly growing and our students are digital natives, this growth and advancement of e-books and e-readers has yet to take hold in the elementary school library. Ferriter (2010), suggested that schools get ready for a revolution because e-readers will soon be the norm in schools. These librarian interviews would suggest differently—not all schools are ready.

The final question was asked to see if the librarians wanted to add anything about technology, e-books, or e-readers. This question was intended to give the librarian an opportunity to voice additional opinions or add to any response. All four librarians added a closing remark. Librarian 1 stated:

No, I feel bad that I don't have any e-readers, but it's good to see both sides. I just haven't decided that it's worth spending the money on for me. Not a lot of the kids have e-readers at home, but we have e-books and they can read them on whatever device they have. So that's kind of where I am.

Librarian 2's response was:

No, I do like e-books. They are just so important to me that I just don't know why some schools think they are not. There are schools that do have e-books, but if the librarian is not encouraging students to use them, they are not going to use them. I went to a key person in fourth grade and told them I have some grant money and I asked what are some things you need or might need for the next unit and what would really help you? So, I found some e-books for her; she used them and thought they were so good and helpful to the students. I do encourage other teachers to use e-books and I try to get the younger kids excited about them because that's the thing—you don't want to spend the money on the e-books if they are not going to be used. To me that's the thing—interactive, multiple-use e-books.

Librarian 3 commented as well:

Well we are just getting started, and I like that you can't lose them because they are in the computer. You can't destroy it like the paper books. They do cost more, but when you consider that they cannot be lost and they cannot be ruined, they should last forever, so

that's what I like. Students can use them in the classroom, but they do not take them home. There will be more home access soon; right now we have 60 books students can access, but when they read those, I will have to get 60 more. It is a challenge keeping enough e-books in the library and keeping up with the different levels needed for students. It's really cool, it's a cool format, it's exciting, it's the wave of the future. Librarian 4 added, "I can't think of anything. The part of technology that I do love is the e-reader. Learning to use technology is the access to books."

The comments from the librarians were synonymous with the AASL position on the role of the school librarian. The AASL has stated:

The school librarian plays a prominent role in instructing students, faculty, and administrators in a range of literacies, including information, digital, print, visual, and textual literacies. As leaders in literacy and technology, school librarians are perfectly positioned to instruct every student in the school community through both traditional and blended learning. (AASL, 2009, p.1)

All four librarians did comment on the district curriculum and district expectations. They all confirmed that there is not a district curriculum to follow and that they do not receive district money to supplement library materials. Following are the district policies in place for librarians.

District Documentation

Within district policy code EFA(LOCAL), the instructional resources and instructional materials section outlines the objective of the district when addressing instructional materials and instructional resources (<http://pol.tasb.org/Home/Index/593>). "Instructional resources" refers to textbooks, library materials, materials for classroom use, and any other instructional materials, including electronic resources. Additional objectives include delivery of materials needed for

the learning process, support, and assistance in using the resources to support the district's educational programs. The school board depends on the professional staff to enrich and support the curriculum, stimulate growth, present varying sides on controversial issues, represent ethnic, religious, and cultural groups, and provide a wide range of background information to assist students. In the selection process of instructional resources including library acquisitions and supplemental materials for classroom use, board policy states that materials should support the general educational goals of the State of Texas and of the district while being consistent with campus improvement plans. Materials should meet high standards in readability, content, and accuracy and should have educational significance. Board policy from this district states that materials should be age-appropriate and cover a variety of ability levels and learning styles. Additionally, the policy states that materials be designed to motivate students, aid in their learning, and enable them to become good citizens while making informed judgements in their daily lives. These policies recommend that library acquisitions involve administration, teachers, district personnel, and community members when appropriate. Selection of materials is an ongoing process; the removal of outdated materials should be considered with periodic replacement or repair if needed. The policy further states that library materials should be chosen to help ease tension and clarify history while presenting and analyzing intergroup tensions and conflict.

Under instructional resources and instructional materials in the EFA(LEGAL) code, board policy states that the district possesses significant discretion as to the contents of school libraries (<http://pol.tasb.org/Home/Index/593>). However, the district should exercise discretion that is consistent with the First Amendment of the United States Constitution (freedoms concerning religion, expression, assembly, and the right to petition). This is further addressed

with the removal of books from the library. The district should not remove any books for the purpose of denying students access to ideas with which the district may disagree. The district may remove books it deems pervasively vulgar or due to the educational suitability of the book. EFA(LEGAL) cites Board of Education v. Pico, 457 U.S. 853 (1982) as precedence. This Supreme Court case involved school officials removing books from a junior high and high school library that they considered objectionable. The First Amendment includes a right to receive information. The United States Supreme Court sided with the students, stating that students have a right to receive information even though school officials may not agree with content. School board policy does not allude to or have recommendations for the purchase of e-readers or e-books. The purchase of library materials is left to the discretion of school administrators and school librarians.

Whereas the district does not give school librarians a curriculum to follow, it does provide direction for student learning, and it does direct schools to purchase materials that will directly affect student learning. Although e-books and e-readers are not directly mentioned, these materials can be placed under the guidelines of both local and legal policies. School board policy guides the purchaser of library materials to ensure that purchases meet the needs of all students and that the materials are balanced for ethnic groups, religious groups, and diverse cultures. The teacher-librarian interviews indicate that the purchasing of materials follows school board policy and that each school is trying to meet the needs of all their learners.

CHAPTER V

SUMMARY OF FINDINGS, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Discussion

Even though participation was not as high as anticipated, a few commonalities surfaced in examining the surveys and the librarian interviews. The most obvious point made by the librarians was the lack of funding provided to school libraries, leading to the librarians cautiously moving forward with e-book purchases. This point made by the librarians concurs with prior research. According to Boehm (2009), it is common for librarians to be passive recipients of budget decisions. Harris (2012), stated that the cost of e-books and e-readers can place a heavy burden on libraries. In a research article by Huysmans, Kleijnen, Broekhof, and van Dalen (2013), the researchers recommended that library resources, including electronic media, should not be the last item placed on a district budget list that is up for discussion. The librarians interviewed must

supplement their purchasing of new materials through fundraisers like book fairs and parent donations, as well as through grant-writing. Most of the survey respondents do not have e-readers in their library and stated that the funding or the cost of the devices limits them in their efforts to supplement their library with electronic devices. In fact, very few of the elementary schools in this southeast Texas district have e-readers available for student use, and of the schools that do carry them, the devices cannot leave the schools or library. Research has demonstrated that there is a positive correlation between a well-funded library and student achievement (McCracken, 2001). In 2001, McCracken stated that the most frequent barriers

faced by school librarians or teacher-librarians are a lack of time, a lack of adequate funding, support from teachers, and too many students to provide for. Additionally, it was noted that when fewer books are available in the library collection, educational achievement is negatively impacted. Per McCracken (2001), the role of the school librarian is changing, and an integral part of that change involves electronic media. Electronic media can help support both teachers and students in the effort to learn. Promoting reading and good reading habits are traits associated with the school librarian (Doiron, 2011). School librarians must manage materials in the library, which includes electronic devices. Although not all librarians participated in both the survey and the interviews, it was evident that technology is a part of their job. The librarians are accepting of this change, but not all are equally adept with the use of technology. This concurs with Johnston (2015), in that the job of the school librarian is becoming less defined as technology grows. McCracken (2001), demonstrated, using librarian surveys, that often the role of the school librarian is not clear or does not have a clear definition. The position of the AASL is that the school librarian is an instructor, as well as a collaborator with fellow educators, to promote student learning (AASL, 2009). The school librarian presents professional development to staff, school communities, and administration in both traditional and blended learning (AASL, 2009). According to McCracken (2001), librarians and principals do not always agree on what the role of the librarian should be. Although this record of study does not include research involving principals, it does reinforce prior research that the role of the school librarian is changing and that the role is different depending on the school or district examined.

Availability of books for download onto e-readers was another concern raised by the librarians. Peterson (2014), noted that a challenge facing school librarians is in expanding their e-book collection while maintaining the traditional paper book inventory, in addition to the other

services provided by the library. According to the librarians interviewed, the cost and availability of e-books are somewhat limited, and the purchase of current fiction books creates an additional concern for some librarians. During the librarian interviews, it was mentioned that most e-books in the libraries are nonfiction, with one librarian stating that all the e-books in the library are nonfiction. A 2001 survey conducted by the Library Research Service with 1,326 participants showed that, at the time of the survey, of the books in the library collection, five percent of the fiction books were e-books and 11% were nonfiction. In 10 years, these numbers were expected to grow to 22% fiction and 37% nonfiction (Helgren, 2011). This growth concurs with the opinions of the librarians that most e-books available for purchase are nonfiction.

E-books being purchased in the schools are not being loaded onto e-readers, but instead mostly are being placed on computers. The number of e-books being purchased varies widely among campuses based on the purchasing power of those campuses and the individual librarian. During the librarian interviews, one librarian stated that some campuses do not carry any e-books while others may have multitudes available for their students. The inequity in funding was again cited as a deficiency that occurs among campuses regarding the availability of materials for students. This deficiency can have a negative impact on student reading. The AASL stated that school librarians can partner with other educators to enhance reading development in all students. School librarians model and teach reading comprehension strategies. Reading is a process that is different for everyone. According to Durant and Horava (2015), this process often depends on factors such as interest level, the availability of materials, and time spent reading. Well documented reading research also states that reading is a process involving engagement, motivation, and attainment (Guthrie, Wigfield, & VonSecker, 2000; Guthrie, Hoa, Wigfield, Tonks, & Perencevich, 2006; Wigfield et al., 2008). Additionally, inadequacies and

deficiencies in library materials can affect a student's attitude and enjoyment of learning. Enjoyment of reading is an underlying factor of the job of school librarian. School library programs that are led by a qualified librarian provide students with opportunities to experience the enjoyment of reading (AASL, 2013). During the librarian interviews, all the librarians stated that they enjoy reading and want to have their students enjoy reading as well. In turn, they do as much as possible to bring the joy of reading to all their students. This is a key concept within the Constructivist Learning Theory and reinforces the conclusions by Zimmerman (2005), that school librarians do influence the reading habits of students. Furthermore, this record of study concurs with Clark and Zoysa (2011), and Clark (2014), in that elementary school librarians can influence students using electronics to increase their enjoyment of reading. Through the lens of Constructivist Learning Theory, the elementary school librarian can engage and motivate students to read with the use of electronic media. During the librarian interviews, all four librarians stated that they do use electronic media in their interactions with students. They use computers, tablets, e-books, and Internet Websites to bring information to their students. This interest and caring about student learning exemplifies this theory.

Another commonality that arose during the interview process was in how librarians oversee the purchasing of materials for the library from the money they acquire through fundraisers and grant-writing. All librarians interviewed stated that the district does not supply funding for the library and that most schools do not budget money for the library. Funding is often cited as a stumbling block for librarians when attempting to move to digital reading (McCracken, 2001; Harris, 2012; Huysmans, Kleijnen, Broekhof, & van Dalen, 2013; Johnston, 2015). "School library programs staffed with state-certified professionals provide an approachable, equitable, personalized learning environment necessary for every student's well-

rounded education” (AASL, 2009, p.2). Opportunities for the school librarian to expand on this learning environment should include a standard curriculum.

According to the librarians interviewed, there is not a district curriculum or schedule available to the librarians, leaving their work schedule dependent on times when homeroom teachers can bring their students to the library. Some campuses have the library as part of a “specials” or “fine arts” rotation during teacher conference time. During this rotation time, students are dropped off by their teacher to various rotation teachers. This allows the homeroom teacher time for meetings or planning; however, it does present a hurdle for the librarian to mirror or support the curriculum being taught in the classroom. District policy for the elementary school libraries does not direct a curriculum for the librarian, but it does reserve the right to examine books and withdraw books from a library if they are deemed inappropriate and vulgar (<http://pol.tasb.org/Home/Index/593>).

Additionally, while most of the librarians surveyed acknowledged the existence and need for electronic devices for today’s digital-age students, there is still a reluctance to bring the devices into the library due to students not demonstrating the desire to use them. Per a *School Library Journal* survey, elementary schools are not major adopters of digital reading technology (Hoey, 2010). It was further noted by the librarians surveyed that e-book technology is an extra in the library. Students in elementary libraries are using paper-bound books more than e-books. According to one librarian surveyed in this record of study, students want to hold the books, smell new books, and experience the tactile stimulations offered by a paper book. This concurs with the hypothesis of prior research noting that electronic media may not be as comfortable as a textbook experience for readers (Woody, Daniel, & Baker, 2009).

One librarian noted that there might be a gap between the more-affluent-school students who have the electronic devices at home and the less-affluent-school students who do not. These electronic devices may not be readily available to the lower-income students, creating a need for the devices to be present in schools. The campuses that do have lower-income students stated that the students like the computers and tablets present in school, but they are less likely to use an e-reader than traditional paper books. As noted by Dryer and Nel (2003), it is important for the librarian to identify instructional practices that can influence reading habits of students both in and out of school. The teacher-librarian must become the mentor and resource manager for students, helping them direct their learning experience, which epitomizes constructivism. Johnston (2015), concurred that the teacher-librarian must be an information provider to the school community and the parents of the students who attend that school. Peters (2009), emphasized that the school librarian must address technology and integrate literacy skills into a digital curriculum. “The school library program is not confined by the school library walls, but rather, with the use of technology and online resources, connects to the community and branches throughout the entire school” (AASL, 2009, p.1). Technology integration can be a powerful tool in providing a positive learning experience for all students (Johnston, 2015). Librarians face challenges in meeting the needs of a diverse learning population. Students read at different levels, have different supports available at home, and could be limited in their access to digital media. This can raise additional research topics to determine if socioeconomic status, home access to digital media, or reading levels may be correlated to the use of electronic devices such as e-readers in elementary school libraries.

Findings

Using surveys and interviews in this record of study, the answer is not clearly apparent to whether the advancement of technology is affecting the role of the elementary school librarian. There is not a district curriculum or schedule to guide librarians in the use of or implementation of e-readers and e-books in the elementary school library. This lack of district guidance does allow for autonomy, but it also creates a lack of uniformity in the school libraries. This record of study also shows that the schools librarians are responsible for securing their own funding. The librarians use the money they raise through grant-writing, donations, and fundraisers to make purchasing decisions about what materials they will offer students in their library. Per the librarians interviewed, they meet as an affinity group twice a year, with funding generally being the topic of choice for open discussions. Without a uniform means for funding, purchasing library materials such as e-books and traditional paper books remains the responsibility of the school, not the district. Some librarians purchase multitudes of e-books, while others may only purchase a few, and still others choose not to purchase any.

Through the examination of the surveys and during the librarian interviews, it was discovered that most of the schools do not carry e-readers, only electronic devices such as computers, iPads®, and Chromebooks™. Of the libraries that do have e-readers for student use, none of the e-readers can be checked out to students. The e-readers are only used in the library; they do not go home with students. The librarians indicated during the interviews that the cost of the e-readers and the chance for loss or damage is too great a risk to allow students to take the devices out of the library. The lack of home use does not follow the findings of prior research by Clark (2010), and Johnston (2015), who suggest that reading advancement is a process enhanced with both school and home use of electronic devices. Additionally, this does not exemplify the

Constructivist Learning Theory, which implies that teachers and parents should work together between home and school to help students direct their learning.

This record of study suggests that the school teacher-librarians in this southeast Texas district are not under pressure to fill their library with e-readers or e-books. The librarians do not see their role changing due to the increase and advancement of technology. The librarians in this district do see the benefits of technology in motivating and engaging students, but the cost of adding these electronic devices to the library is often prohibitive. Whereas the librarians do not see a direct impact on their job from the increase of electronic devices, they do acknowledge that they have a responsibility to get students to love reading, and they will use and learn what is needed to keep up with student demands.

Implications for Practice

This record of study implies that teacher-librarians should use electronic media with students to enhance their reading experience and to help motivate students in reading, but access to paper books is still necessary for all students. It became apparent during the librarian interviews that elementary school students choose electronic devices for games, but often prefer the traditional paper book for reading. One librarian commented that the students like to feel, smell, and hold the book as much as they like to read the book. This concurs with the outcome of the Woody, Daniels, and Baker (2010), in that students do prefer paper books over e-books and that libraries should be cautious when replacing paper book inventory with e-books. The tactile, physical experience is important to the student. Although research does demonstrate that e-books and e-readers can help with student reading (Larson, 2010; Harris, 2012; Johnston, 2015), the librarians in this southeast Texas district are at different levels when acknowledging

these findings. Most librarians are slowly moving toward electronic media, but remain loyal to traditional paper books.

E-books on computers are a viable option for the librarian to use to expose students to digital books and engage students with electronic media, but they should not replace paper books. Additionally, e-readers, specifically Nooks®, Kindles, and other similar devices, are not in demand or a desirable option for the librarians in this study. The librarians did indicate that e-books loaded onto computers and iPads® are used in school, but mostly by group reading instructors and Dyslexia teachers. This is congruent with the findings of Harris (2012), who stated that e-books and e-readers are successful tools with struggling readers, and of Rhodes and Milby (2007), who stated that e-books are effective tools for students with disabilities and that these devices help with fluency and comprehension.

This record of study concurs with Helgren (2011), in that the future of e-books and e-readers is still somewhat unknown and that librarians are more likely to have deeper feelings toward traditional paper books than e-books. It will be the library patrons who will guide the supply and format of books in their school. Additionally, Harris (2012), concluded that e-books and e-readers may not be an ideal fit for elementary schools now, citing the cost and availability as possible barriers for school librarians to overcome. While the formats and tools for accessing information are rapidly changing, a goal of the school library and the school librarian remains the same—engage and motivate students in reading (Lamb, 2015).

Implications for Policy

The school board policies in this southeast Texas school district are very broad and give the decision-making responsibility about library materials to each school. Within the school, the librarian makes most of the choices on what resources and materials are offered in the library. In

addition to a broad policy, district budget money is not identified for school libraries. All librarians interviewed stated that the money they need for book purchases is raised by the school, donated by parents, or obtained through writing grants. The school library does not directly receive district money for purchasing materials. If the integration of electronic technology is a focus for the district, then librarians need district help in purchasing needed materials. As this record of study has demonstrated, elementary school libraries are standalone entities that do not have equal access to resources. School librarians do not have an equal understanding of technology, there is not a defined library curriculum, and some schools have technology specialists to help with curriculum integration while others do not. These findings imply that if a school district intends to move forward with e-books or e-readers, it needs a plan for school librarians to integrate technology into a needed library curriculum and supply the libraries with the funds to accomplish this task. As stated by Huysmans, Kleijnen, Brockhof, and van Dalen (2015), library resources that include electronic media should not be thought of last when adopting a school budget. The school library produces a learning environment that promotes reading and helps to create a lifelong reader (Novak, 2014). Ferriter (2010), stated that there is no doubt that e-readers will be a part of K–12 curriculum; the question is whether the school librarian is ready to meet the challenge.

Implications for Research

This record of study adds to research about the changing role of the school librarian. As stated by Harris (2012), schools and school librarians are facing new challenges as technology grows. These challenges include the availability of e-books, the cost of e-books, and the balance between e-books and traditional paper books. During the librarian interviews, all the librarians indicated that they like integrating technology into their lessons with students, but they face the

challenge of deciding how much they wish to spend on electronic media versus paper books. This study also indicates that the school librarians in this district concur with the research of Helgren (2011), in that the future of e-books in the school library is growing, but the demand at the elementary level is not strong. During the school librarian interviews, it was stated that students still like to handle the traditional paper book—they like the physical experience they receive from the paper book—and are not requesting e-readers to be a part of their library material.

Research on reading in elementary school students indicates that the reading process includes what students do before reading, during reading, and after reading, and it is critical at an early age. Elementary school libraries can be a useful tool to support this process (Clark, 2010; Doiron, 2011; Igbokwe, Obidike, & Ezeji, 2012). It appears through this record of study that elementary schools are not keeping pace with the growth in technology. The job and responsibility of the elementary school librarian is different from campus to campus. The librarian can create their own image of the library and supply customers with materials as they see fit. This record of study indicates that the elementary school librarians in this district can influence the school library with electronic media as much or as little as they choose.

Additional research is needed to determine if electronic media such as e-books and e-readers make an impact on student achievement. Guernsey (2011), stated that per our national report card, roughly two-thirds of our nation's fourth-grade students are reading below grade level. It was also noted that the percentage for minority populations is even worse; approximately 84% of African-American and Hispanic students fall into the statistic of a below-level reader. Librarians for this district reported noticing a gap in student reading by population, but they also stated that they have a job to get all students engaged in reading, regardless of their

ethnicity. The librarians make concerted efforts to choose books that meet the needs of all students. Additionally, it was noted during the librarian interviews that many special education teachers use e-books and e-readers to help advance the learning of their special-needs students. The most identified program by the librarians was the Dyslexia program, with the read-aloud function acknowledged as the most-used tool. E-books can add scaffolding for struggling readers using interactive and audio tools, helping in a multisensory manner to enhance reading (Rupley, Paige, Rasinski, & Slough, 2015).

Implications for Administrators

Research has shown that the role of the school librarian can have a positive impact on student reading (Du & Martin, 2008; Clark, 2010; Durant, 2015; Johnston, 2015) and when working with fellow educators, the school librarian may have a positive impact on overall student achievement. Per Johnston (2015), the school principal could have differing definition of the role of the school librarian when compared to teachers and the librarian, however with the research evidence supporting a strong library curriculum having a positive influence on student reading, administrators should consider additional professional development opportunities for librarians to explore current research on the use of electronic books and electronic readers in the library.

According to the AASL (2009), the school librarian and the library program should provide students and staff materials in all formats to promote reading and the joy of reading. The barriers of budget suggested by Doiron (2001), and Harris (2012), should not prevent librarians from adding digital reading material such as e-books and e-readers to the library. During the librarian interviews and from the librarian surveys in this record of study, it was consistently noted that money was a major factor in the librarian's decision to purchase digital material.

Administrators could enhance a school's reading program by including current research professional development opportunities involving library programs and the use of technology.

Additional use of technology in Special Education programs could also enhance a school's reading program. Harris (2012), states that e-readers have been successful with struggling readers to promote a successful reading experience. The features of the e-reader noted by the researcher, Harris (2012) and Valenza & Stephens (2012), having success with the below level reader were the single page display, the ability to highlight words or phrases, and the built-in read-along capabilities. School administrators should consider exploring professional development opportunities for all staff members in the use of e-technology to find ways to assist struggling learners. Technology is an ever changing and growing aspect of life. Schools, school districts, and school administrators should continue to seek out ways to use current research to help improve student learning.

Teacher-librarians can enhance a student's digital experience in reading through the school library. With digital technology growing so quickly, the traditional elementary school library may change, and the teacher-librarian may need to adapt to these changes. The school librarian can be an influence on a student's reading attitude by helping that student be a more confident reader and have a better-perceived ability to read. Clark (2010), stated that school library users are more likely to enjoy reading and have better attitudes toward reading than nonlibrary users. School libraries and school librarians play a significant role in the development of reading enjoyment, reading attitudes, and reading attainment. The school librarian can motivate and engage students in reading, helping to create avid readers. Administrators can use the finding of current research and the proven influence of a librarian and a well-funded library program to influence reading achievement in their school.

Conclusion

Although the participation was not as high as anticipated, this record of study did yield some important findings. Notable findings from the survey indicated that the librarians were planning to use e-books and e-technology to supplement the library collection and not supplant the paper books with digital books. This decision by the librarians was in part due to the cost of e-technology and the challenge they faced in raising money for their library. The librarians agreed that their students use technology in school but are not asking for technology in reading. The students preferred the paper books offered by the library. The librarians indicated that the students like to hold, smell, and experience the tactile stimulation of the paper book while reading. This was also the sentiment of the librarians during the face-to-face interview process. Another finding from the survey was that the librarians did not think technology was changing the way they performed their jobs but enhancing their opportunity to learn more and aid in bring more technology into the school. All the librarians who responded indicated that they did have some e-books but did not carry a diverse enough representation of material to meet the needs of all learners.

An uneasiness surfaced with the school librarians concerning the availability of e-books for the e-reader and other electronic devices. All the librarians interviewed were very selective in the e-books chosen for their collections. Each librarian stated that they only purchase e-books that can be uploaded to multiple electronic devices as opposed to renting the books for a year or only being able to buy the e-book for a single device. Within their selection process, the librarians also expressed that the types of books available in an electronic format were limited. They could find many more electronic books that were non-fiction than they could find in the fiction genre. This presented a challenge for the librarians when selecting books for their library

collection. The librarians attempted to purchase book that met the needs of a varied population of students including reading levels and ethnically diverse material, but often could not find e-books that met their criteria.

An unexpected finding surfaced during the librarian interviews. This discovery was related to the use of e-books and e-readers with Special Education students. All the schools where the librarians worked had Special Education programs. While programs were different on each campus, the teachers in these programs all used e-books, e-readers, iPads®, and Chromebooks™ with their students during reading instruction. The most mentioned Special Education program using this technology was in Dyslexia instruction. The school librarians stated that the Dyslexia teachers touted the read-aloud feature as the most useful tool in helping students with reading fluency. Reading fluency refers to the smoothness or flow of sounds, syllables, words and phrases that are joined together when speaking. Listening to how the narrator sounds while following along in the book promoted fluency in struggling readers. Additional features such as font size adjustment capabilities, dictionary assistance, and single page display were also mentioned as useful items. The topic of e-technology presents an opportunity for additional research in the use of e-books and e-readers with special needs students. Continued exploration with this powerful technology tool could be an additional resource for Special Education programs to help increase student learning.

Notable findings from the librarian interviews revealed that the schools wrote grants and/or participated in fundraisers to generate money to purchase library materials. This autonomy to create their own library program and raise their own money presented the librarians opportunities to enhance the use of technology, however it also promoted an imbalance of materials between libraries. The librarians were very selective in the e-books they did purchase

to ensure a responsible use of the money, but left each library with different books and number of books for students to explore. All the librarians were using technology, albeit in different ways, in their school library. However due to cost and availability, e-books and e-readers were not a primary focus for the school library. The librarians did attempt to match the wants and needs of the school, but they were very apprehensive in investing in this electronic reading technology. Without district support and guidance, these librarians were moving slowly and carefully toward e-reading technology. The librarians agreed that technology was in the library and that students growing up in this digital age must use technology, however the students were not asking for reading technology such as e-readers. All the librarians continued to view their job as that of a literacy leader, not a technology specialist, and their purpose was to get all students involved in the reading process.

In this district, the school librarians did not have a universal curriculum to follow. They had autonomy to stock and run the library program that best fit the needs of their campus while following school and district guidelines. School guidelines differed by campus and were dependent on the teacher-librarian and the building Principal. The guidelines outlined in School Board policy gave the decision of purchasing library material to the school, reserving the right to only remove materials that were deemed vulgar and offensive. No two libraries had the same collection, the same resources, or the same technology available for their students and staff. This inequity and lack of funding to maintain a well-supplied library could have a negative impact on student achievement and reading (Hopkins, 1989; McCracken, 2001).

In this record of study, the librarians stressed the need for additional funding from the district to enhance their library materials such as e-books and e-readers as these items were costly. Research suggests a positive relationship between student achievement and a

functioning, well-supplied, well-funded school library (McCracken, 2001). According to AASL (2013), studies had indicated the educational level or income level of families are not correlated to student achievement and that students, regardless of socioeconomic status, continue to have a higher achievement rate in schools with a well-funded school library. According to Barrett (2010), students in a school with active, engaged librarians, who read to them and are involved with the learning process, have a positive correlation with reading enjoyment. As noted in prior research, a well-funded media center, with the help of the teacher-librarian, contributes to a student's positive self-perception of their reading habits (Hopkins, 1989). If the school district invests in e-learning materials for the elementary school libraries, student learning and achievement could be positively affected.

As stated above, a well-funded library is positively correlated to student achievement in school and their advancement in reading. Because the libraries do not receive district funding, raising money becomes an additional burden placed on schools and on the school librarian to sustain a strong library program. The American Association of School Librarians (AASL), through more than 60 studies in 12 different states, has shown that the level of library funding in conjunction with staffing levels and collection size has a direct and positive impact on student achievement (AASL, 2013). The AASL also maintain that the school librarian is a leader in literacy and that fund-raising may be a part of their job to help sustain the library collection, but raising money is not the primary role of the school librarian. The role of the school librarian is to uphold and promote a strong educational program using technology and other resources to connect students to their school, to their community, and to the world (AASL, 2009). School districts should consider funding for school libraries to help all students learn and aid in the reading process. Additional resources and monies directed toward the library program can help

all students become active engaged readers and help bolster reading abilities (McCracken, 2001; Hopkins, 1989).

With this record of study, it appears that elementary school libraries would be better served by continuing to purchase traditional paper books and supplementing the library with e-books for the devices they do carry. Even though the students of today are growing up in a digital world, it appears that e-readers are not currently a critical part of that world. The e-books offered by the teacher-librarian are used, but they are mostly read on computers or iPads®, not on e-readers. Students are using these electronic devices for games and entertainment, not necessarily for reading. Perhaps reading is seen more as a chore rather than being valued as a form of entertainment. Solidifying reading at an early age is critical—whether in paper or electronic format, students must learn to read. When talks for budget increases or redistribution of funds occur at the district level, elementary school libraries should be considered; they should be an integral part of funding dedicated to student learning.

The answer of whether the use of e-books and e-readers is changing the role of the school librarian is not concrete. Librarians are adapting to a new technology environment that involves e-learning, but their job remains the same, to get students to enjoy and be proactive in reading. The elementary school librarian is not experiencing pressure from the students or the district to move toward digital readers. The librarians are learning new information about e-platforms and ways to present technology integration to teachers. This could be a shift in the role of the librarian but is dependent on the school. Some schools have the librarian as the technology specialist while others do not. The advancement of e-books and e-readers is having an impact on the school librarian, but this study does not indicate that their primary role is changing.

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APPENDIX A

LIBRARIAN SURVEY

Name: _____ Date: _____ School: _____

The school library can be a starting point for many elementary school readers to experience books. It can help promote a positive reading cultural (The Hindu, 2004). The declining interest in reading (PIRLS 2001, 2006) indicates that there is a growing problem with our elementary school readers. The National Endowment of the Arts (NEA) suggests that digital media, Television, the Internet, and Computer Games, are factors that influence this declining reading rate. According to the National Assessment of Educational Progress, two-thirds of fourth graders are not reading on grade level. Additionally, it is reported that African Americans and Hispanic children are even lower. As much as 84 percent are not reading at grade level.

Can electronic readers help elementary school students become better readers and how will these digital readers impact the role of the elementary school librarian?

Please answer the following questions. (Questions will be delivered through an electronic survey service)

1. Does your library currently carry electronic book readers?
2. If electronic readers (kindles, iPads, Nooks, etc.) are going to be part of a young child's literacy experience, how should they be used?
3. Are your electronic readers used more for academic or pleasure reading?
4. Where do you see the use and percentage of electronic readers in your library in the future?
5. The term "ambitextuous" is used for students who are comfortable using both electronic and paper books; do you believe students will use both mediums equally?
6. Does your library carry Spanish e-books?
7. Does your library carry ethnically diverse e-books?
8. Does your library carry leveled readers in an electronic format?
9. How will digital readers narrow the reading gap in at-risk populations?
10. What budgetary limitations do you face with the integration of electronic readers in your library?
11. Will e-readers supplement or supplant paper book that are currently in your library?
12. What factors influence your decisions to purchase e-books for your library?
13. Where do you see the school district heading with the use of electronic readers?
14. How will digital readers change your role as a librarian?

I will be seeking additional information from 4-5 Librarians to participate in a face-to-face interview. Librarians will be chosen based on school diversity, years of experience, and current e-book inventory.

Do you wish to participate in a face to face interview?

Yes

No

APPENDIX B

LIBRARIAN INTERVIEW

Name: _____ Date: _____ School: _____

May I record our interview? Yes No

1. Research suggests that librarians face a difficult choice in choosing between e-readers and traditional paper books for their library inventory. Do you face this challenge and if so, how do you manage it?
2. Most e-books are sold individually or per device. Group pricing is not always available. This could make group activities a challenge when multiple students are in guided reading groups. Is this a challenge and if so, how is it being met?
3. A potential use for e-books and e-readers in school libraries is in the accommodation of students with special needs. Does your special education population have access to e-readers and do they take advantage of the different features of the device?
4. Do you find the availability of books offered for the e-reader adequate to meet the needs of your students?
5. School libraries are experiencing pressure to integrate technology into a traditional reading program. Are there plans, school or district, to promote reading in an electronic format where so many students now spend so much time?
6. According to many researchers, engagement is a key to reading comprehension and fluency. Today's students are growing up surrounded by technology. Do you feel e-readers and e-books can compete in the electronic world of our students?
7. Researchers have indicated that at-risk populations, African Americans and Hispanic, are more prone to be reading below grade level. How is your curriculum addressing the needs of these students and what resources are being dedicated to reducing this achievement gap?

8. What is the school/district plans for the use of e-readers and e-book in the elementary school library?
9. As the interest in electronic reading materials grows, how do you see the job as a teacher-librarian changing? Where do you see the challenges and the rewards of implementing an electronic curriculum?
10. Is there anything else you would like to add?